

THE ARCHITECTS' JOURNAL



standard contents

every issue does not necessarily contain all these contents, but they are the regular features which continually recur.

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to H one week, I to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhamstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Welbeck 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. School of Architecture, Manchester Municipal School of Art, All Saints, Manchester, 15.	Ardwick 3480
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Welbeck 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 9, Conduit Street, W.1.	Mayfair 8641/6
BCC	British Colour Council. 28, Sackville Street, W.1.	Regent 3613
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 25, Victoria Street, S.W.1.	Abbey 5422-3
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGC	British Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford	Garston 2246
BSA	British Steelwork Association. Eggington House, Buckingham Gate, S.W.1.	Victoria 7301-2-3
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A. Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett Herts.	Radlett 5616
CIAD	Central Institute of Art and Design. 41, 42, Dover Street, W.1.	Regent 3074
CIAM	Congrès Internationaux d'Architecture Moderne. Dolderal, 7, Zurich, Switzerland	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 8161
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 54, Victoria Street, S.W.1.	Victoria 9851
DIA	Design and Industries Association. 9, Conduit Street, W.1.	Mayfair 5432
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
EJMA	English Joinery Manufacturers Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FASSC	Federation of Association of Specialists and Sub Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	Flush Door Manufacturers Association. Stapleford Road, Trowell, Nottingham.	Ilkeston 623/4/5
FLD	Friends of the Lake District. Pennington House, Nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881

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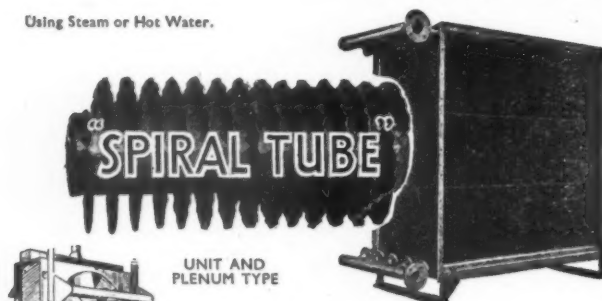
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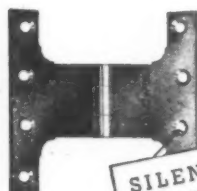
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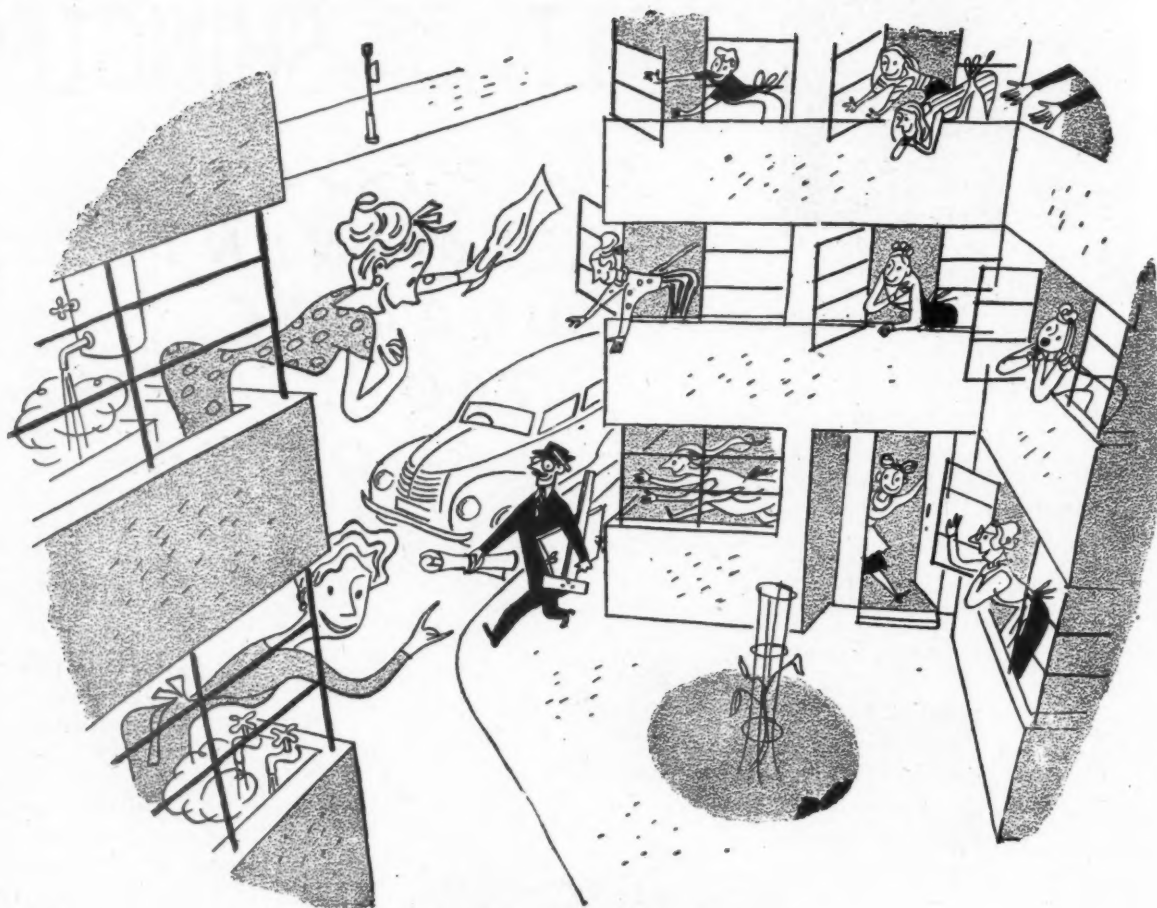
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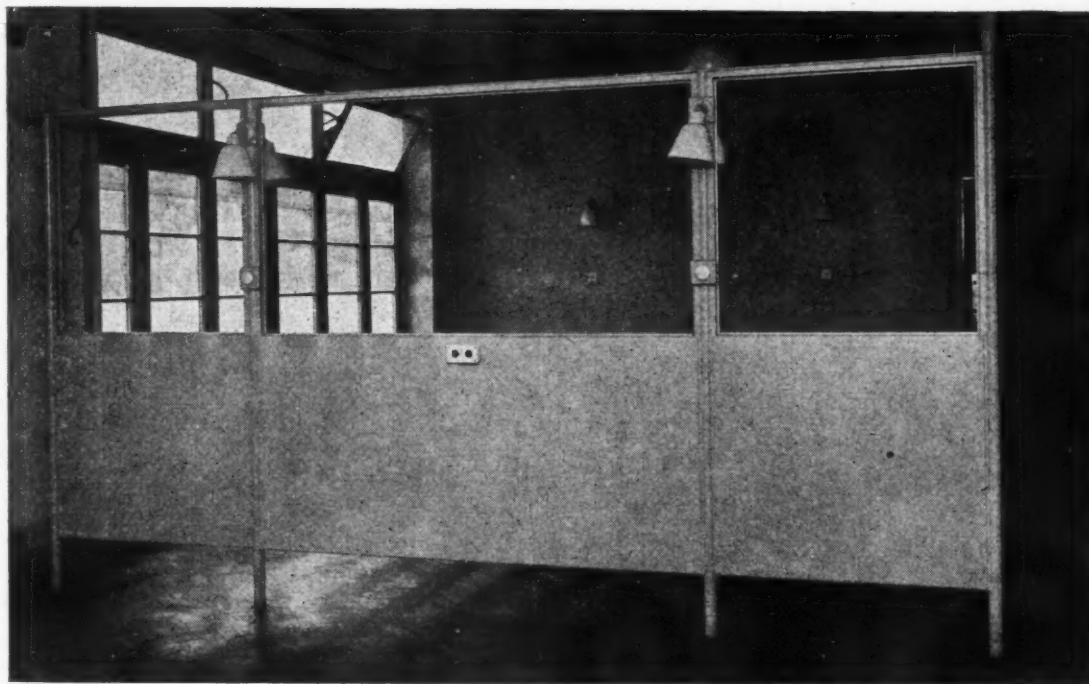
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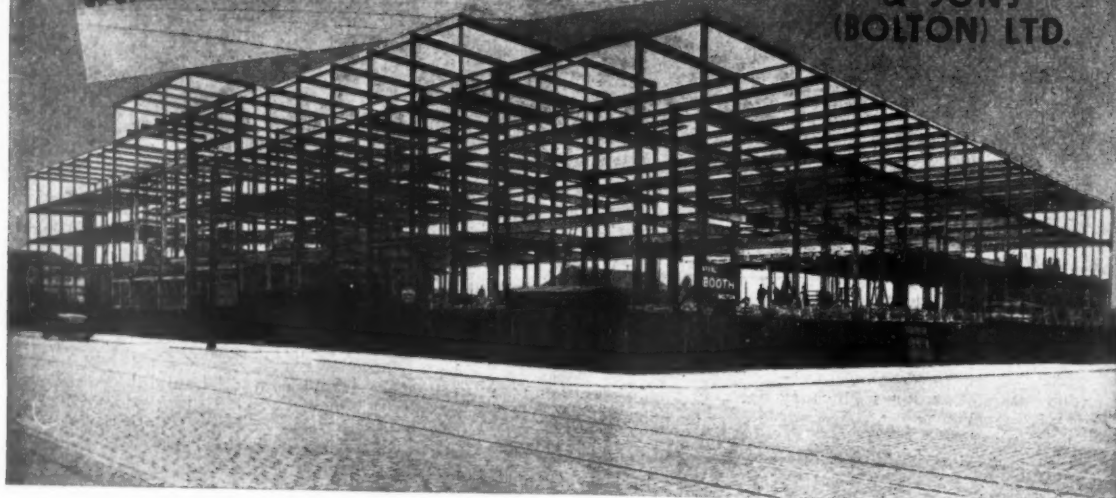
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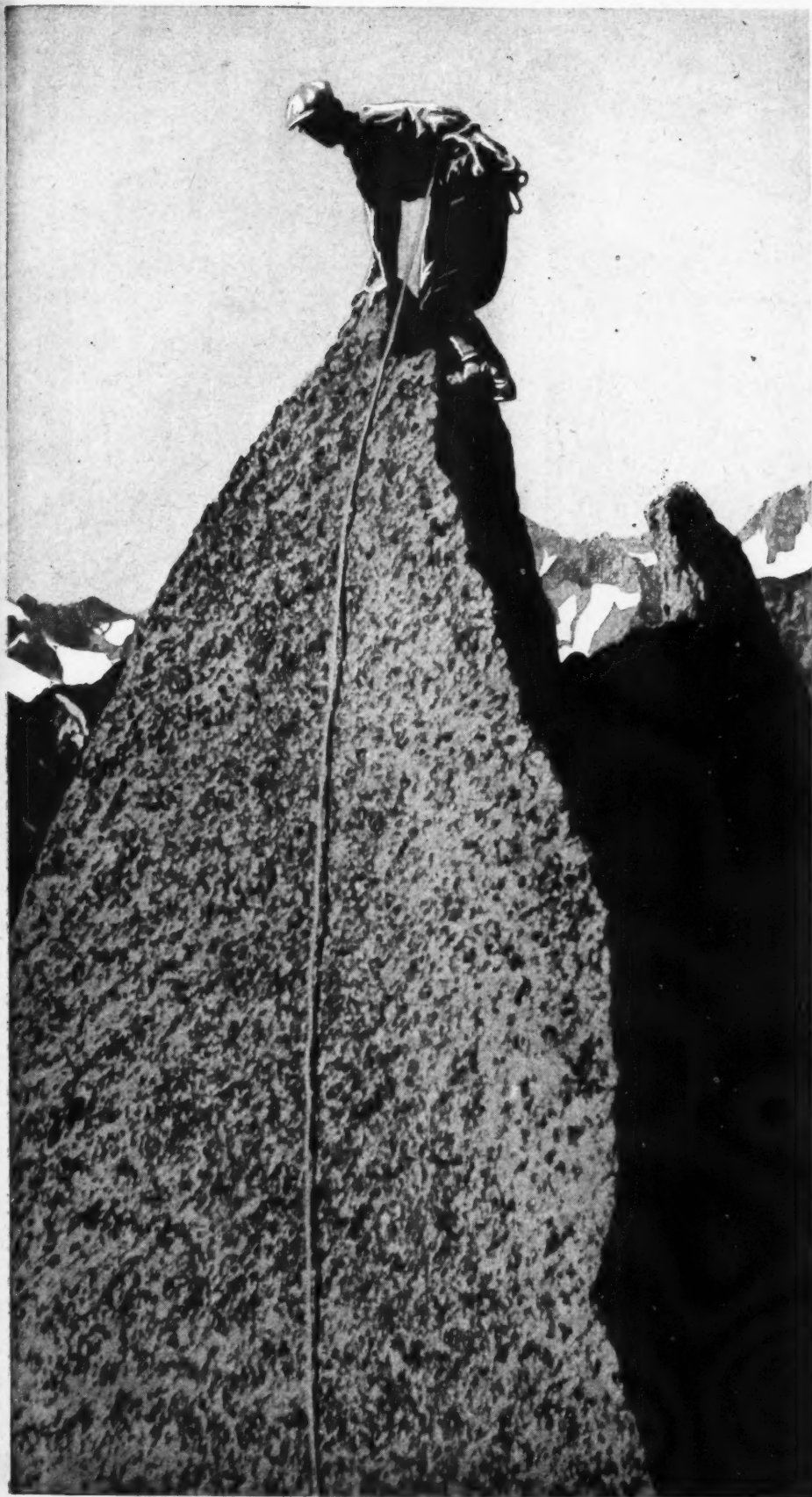
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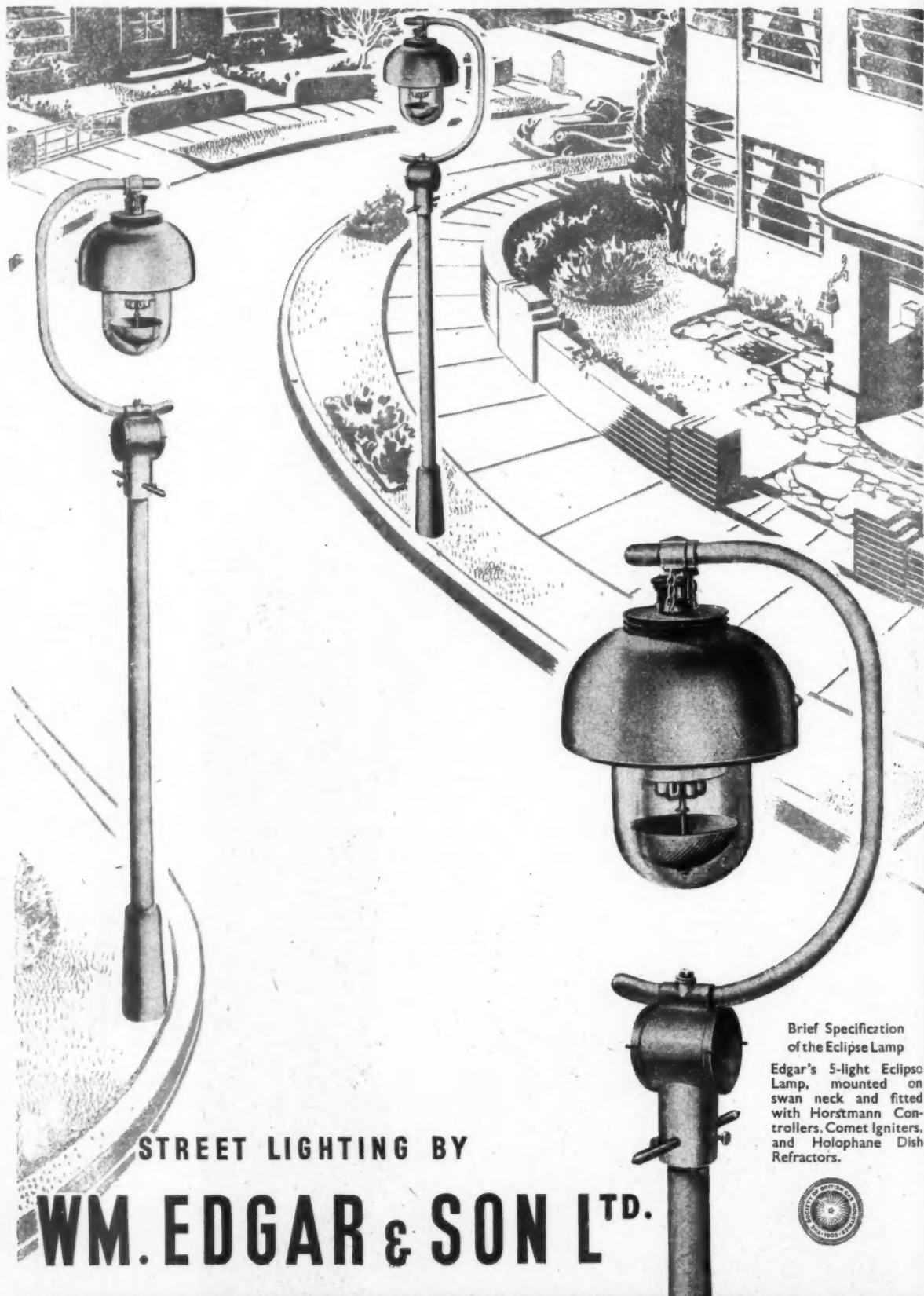
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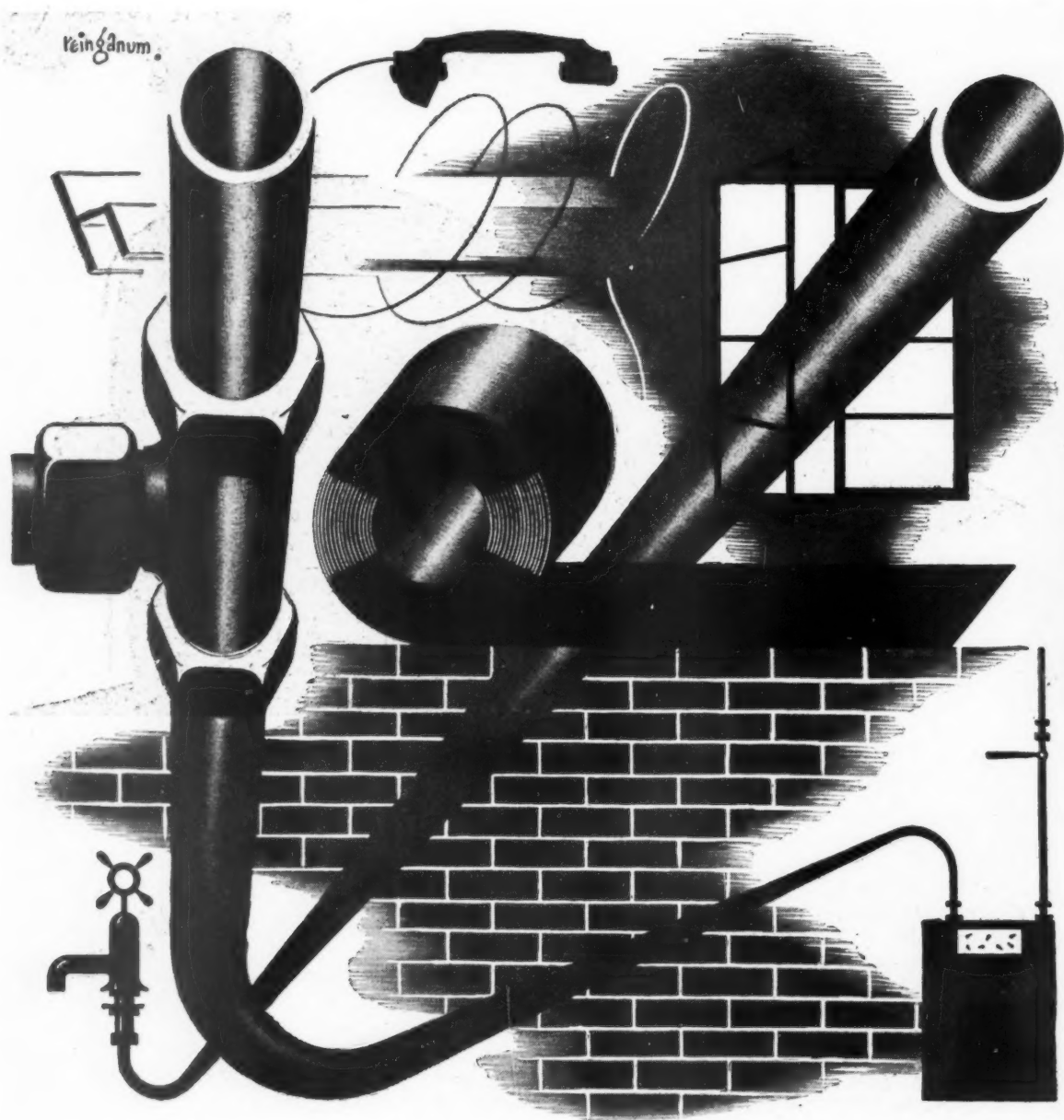
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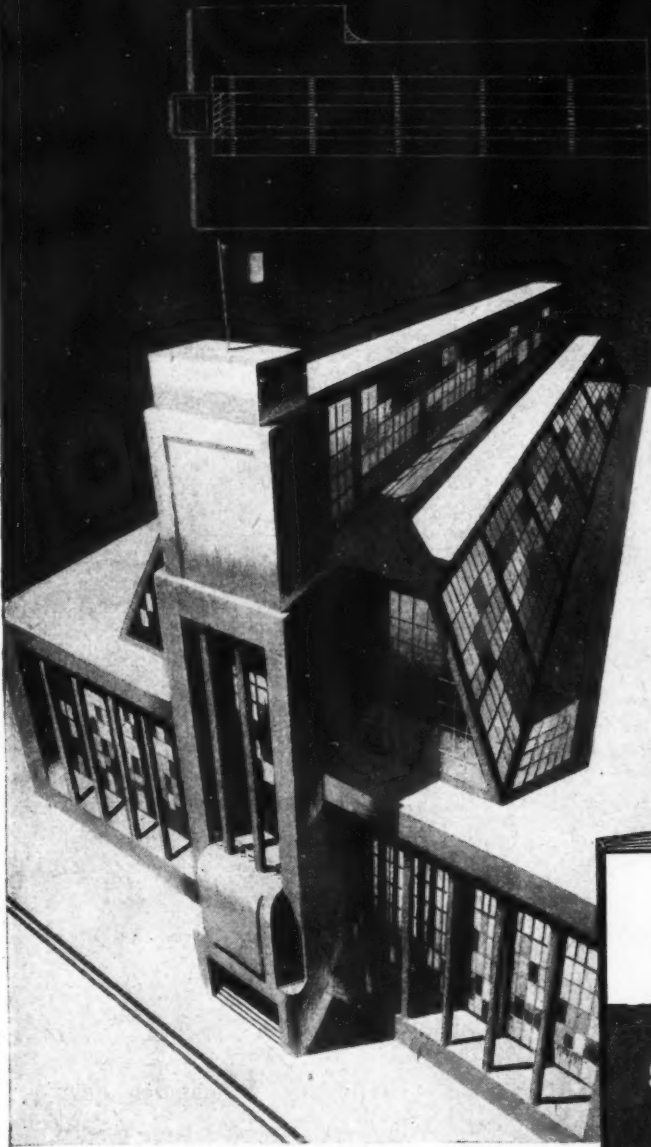
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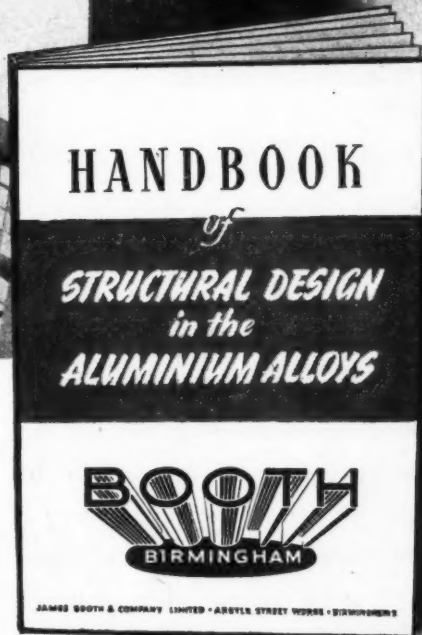
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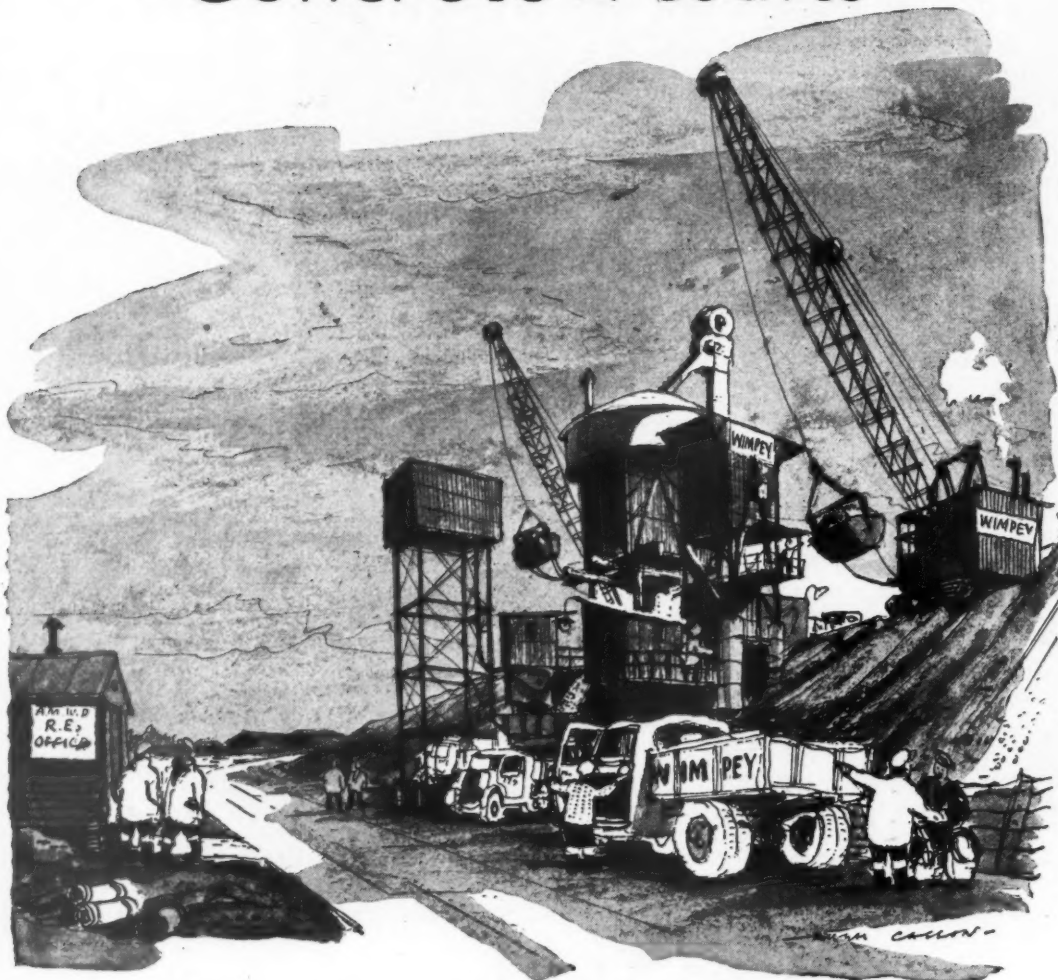


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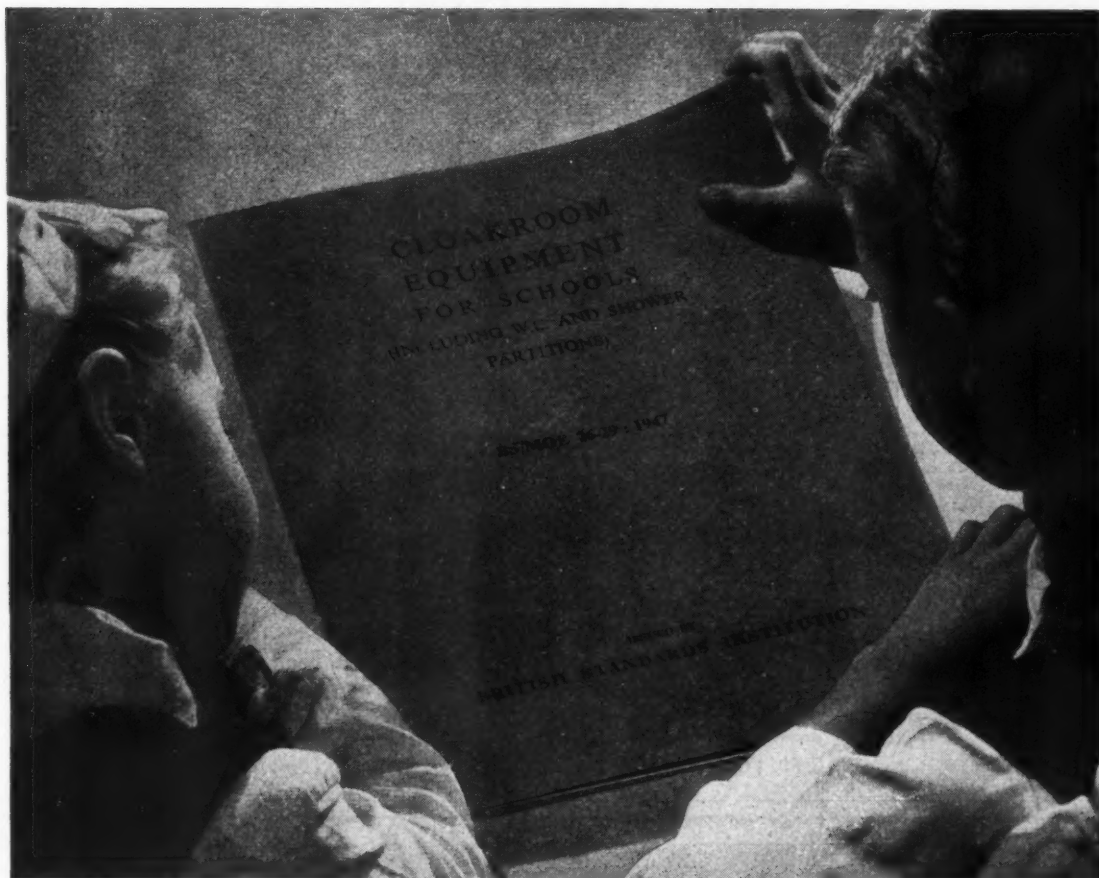
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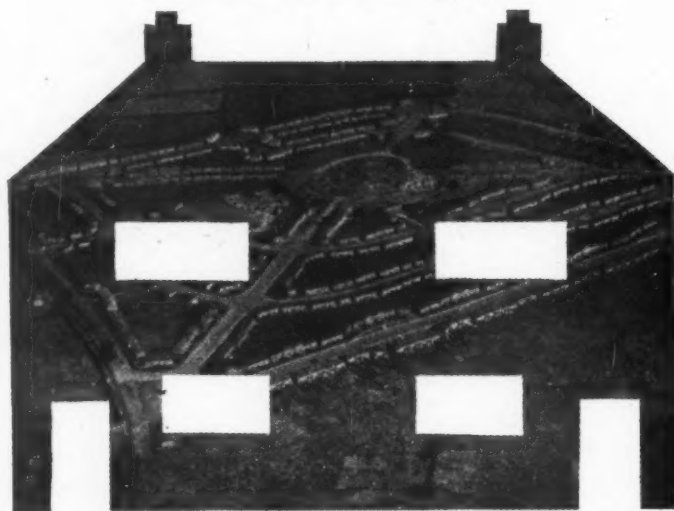


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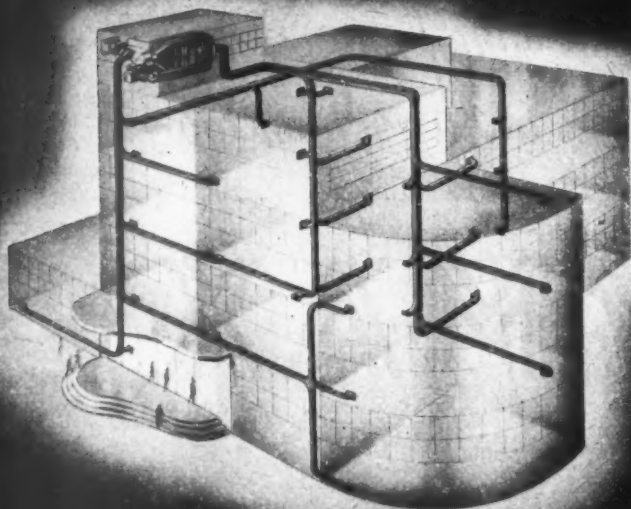


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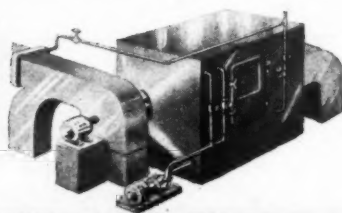
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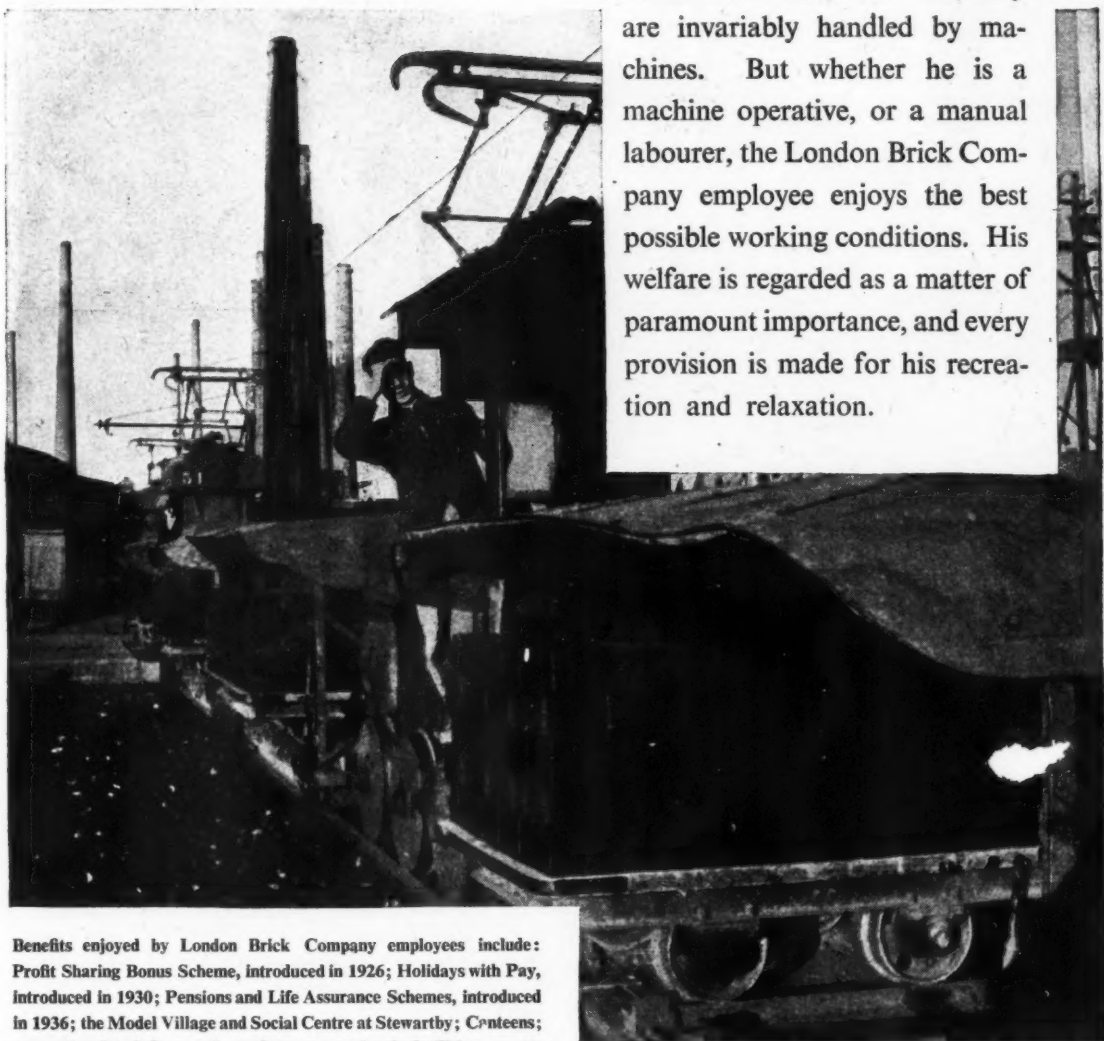


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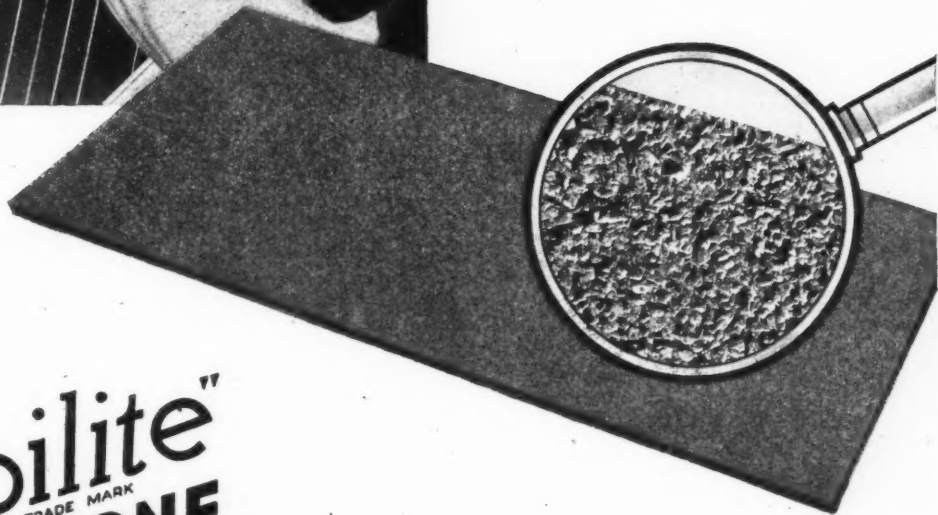
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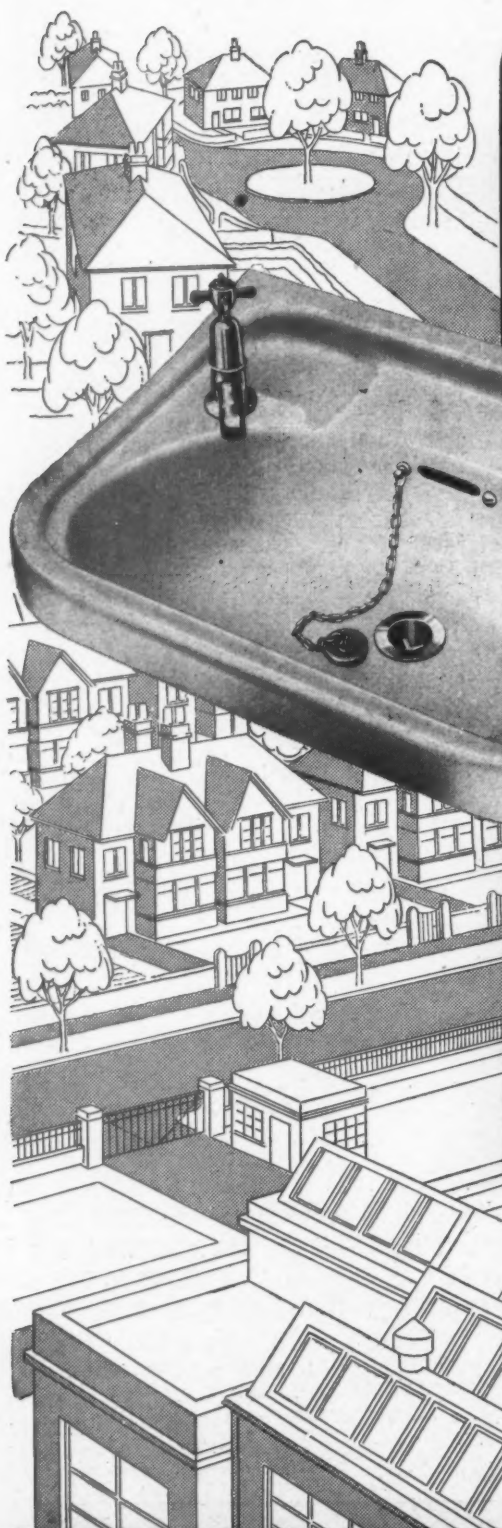
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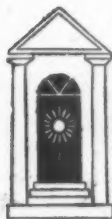
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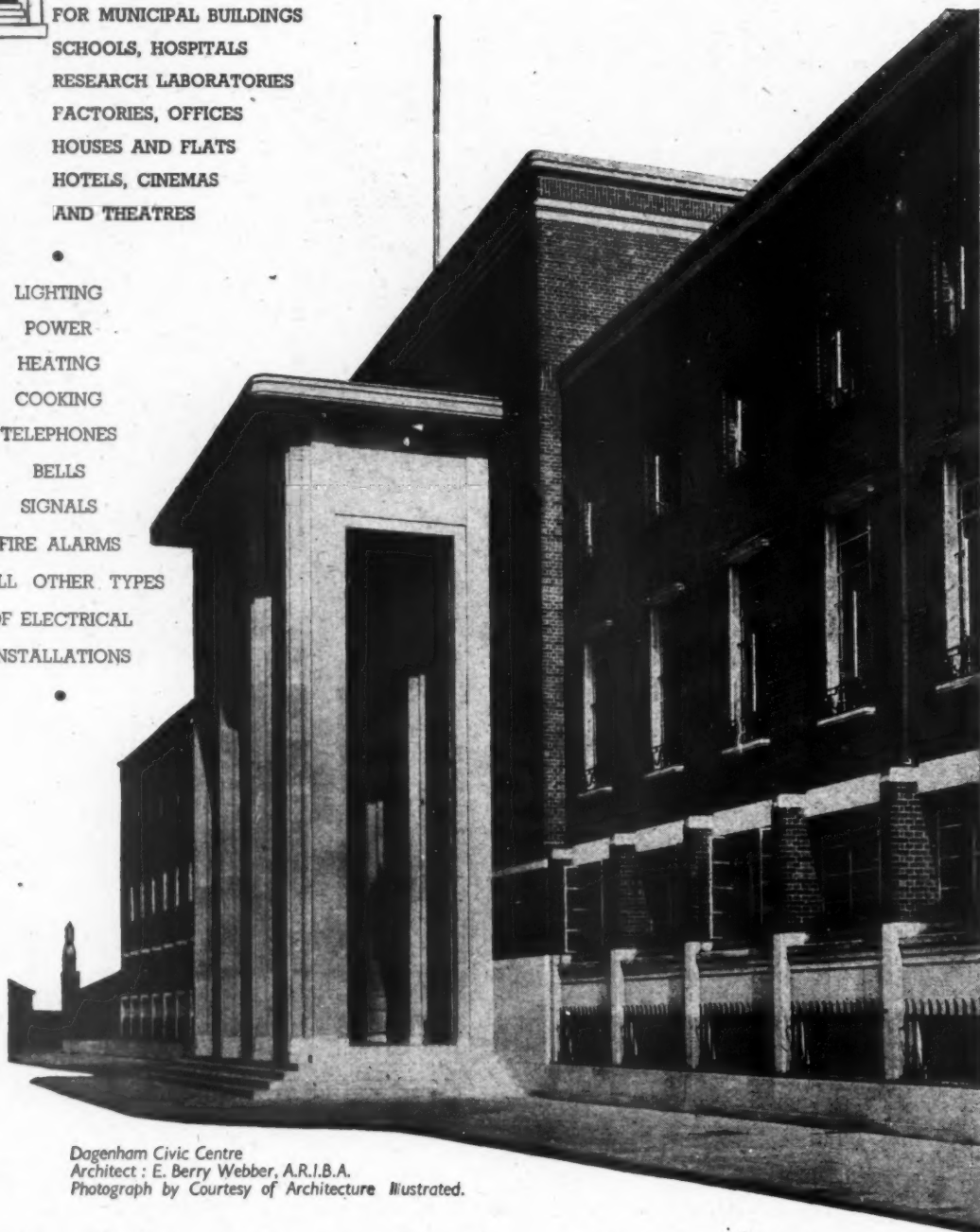
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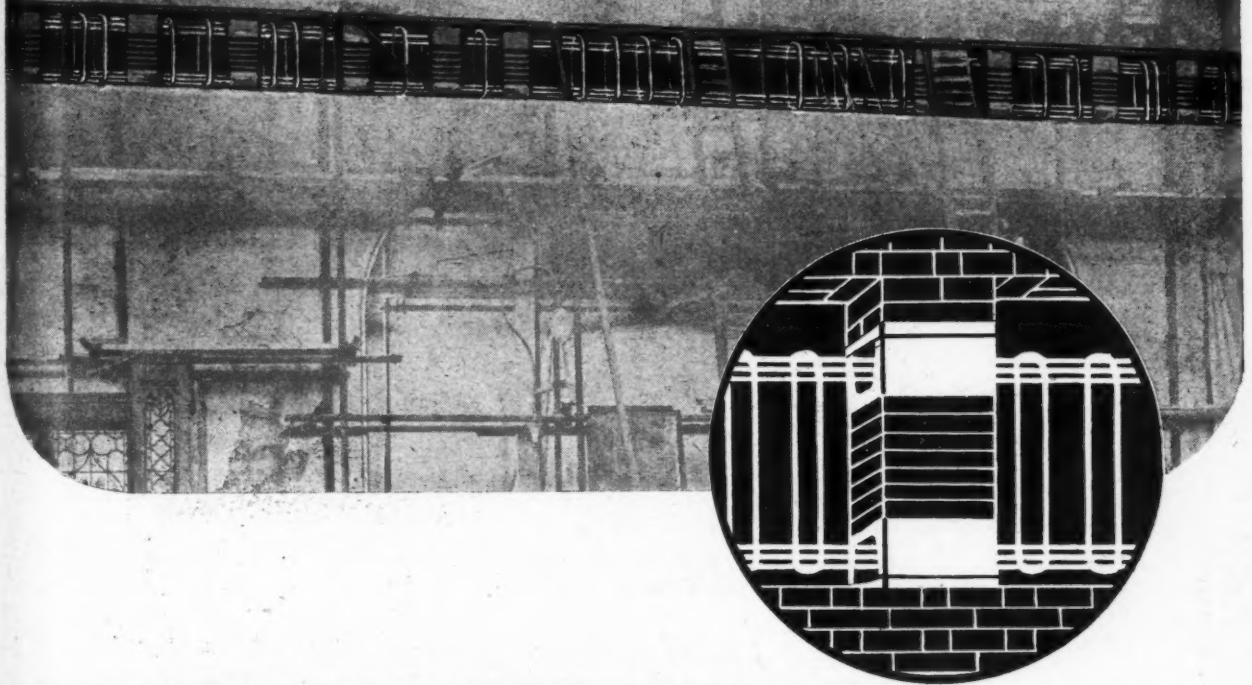
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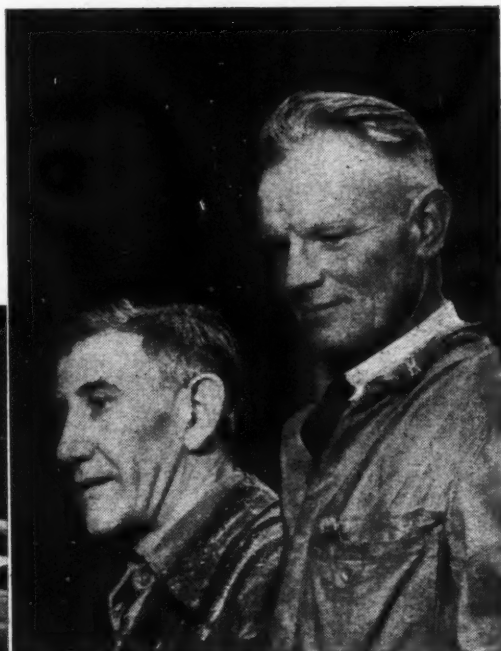
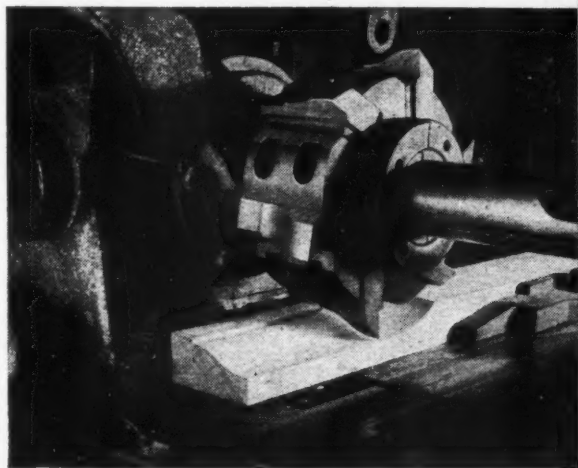
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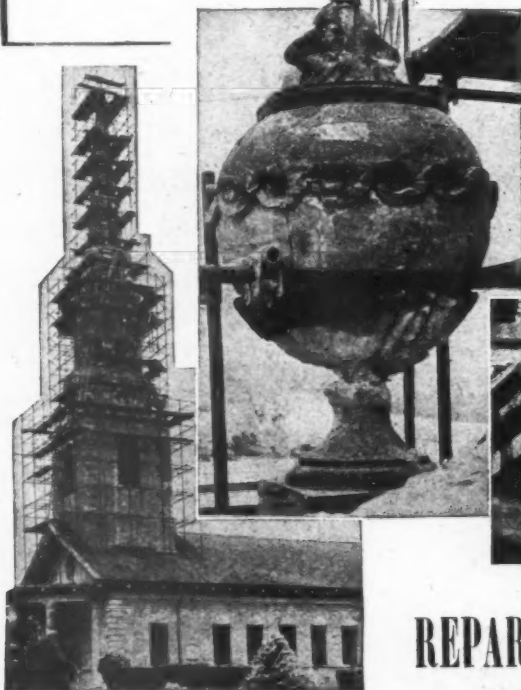
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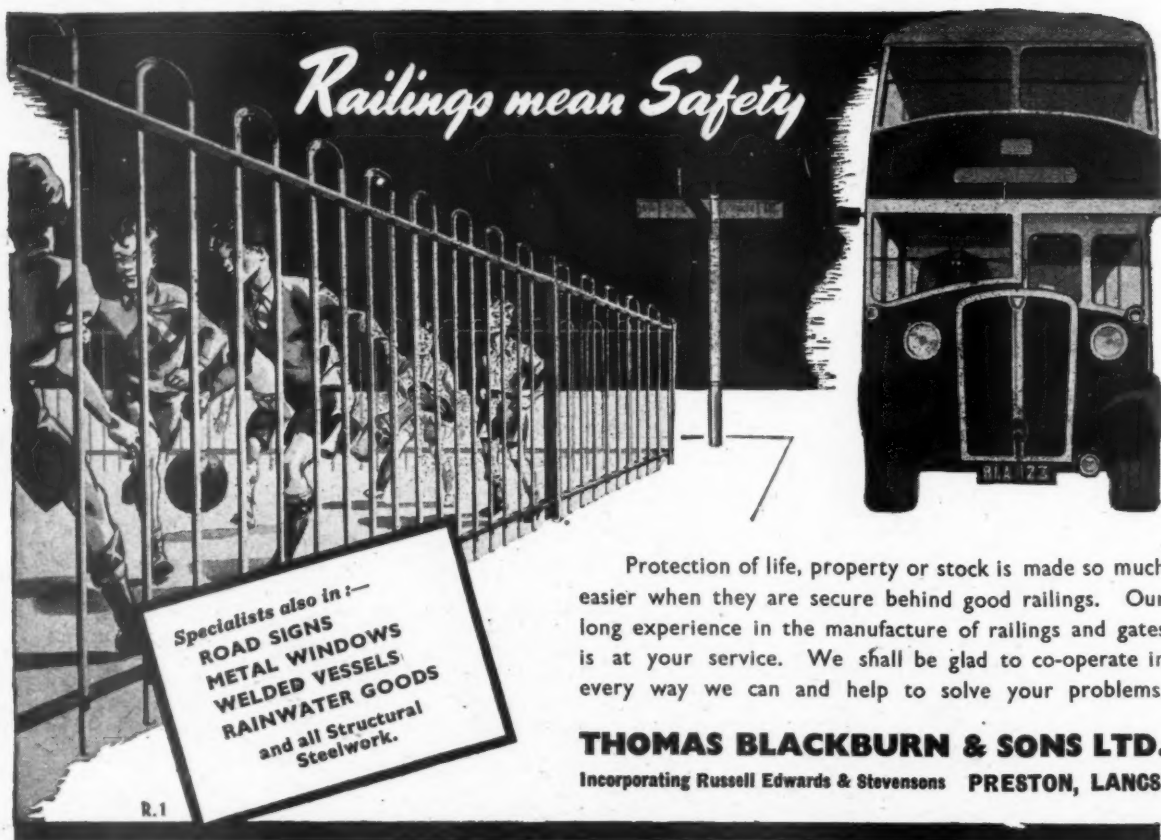
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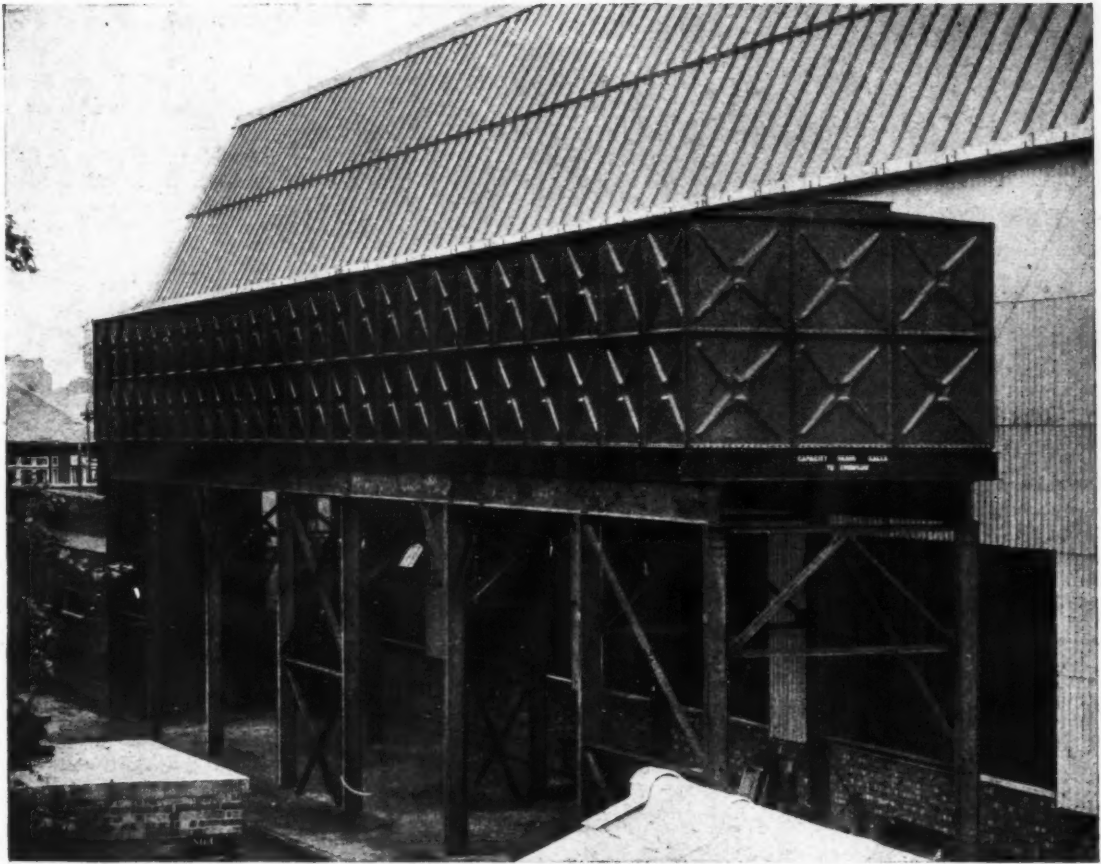
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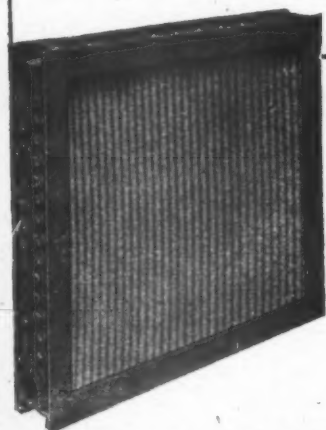


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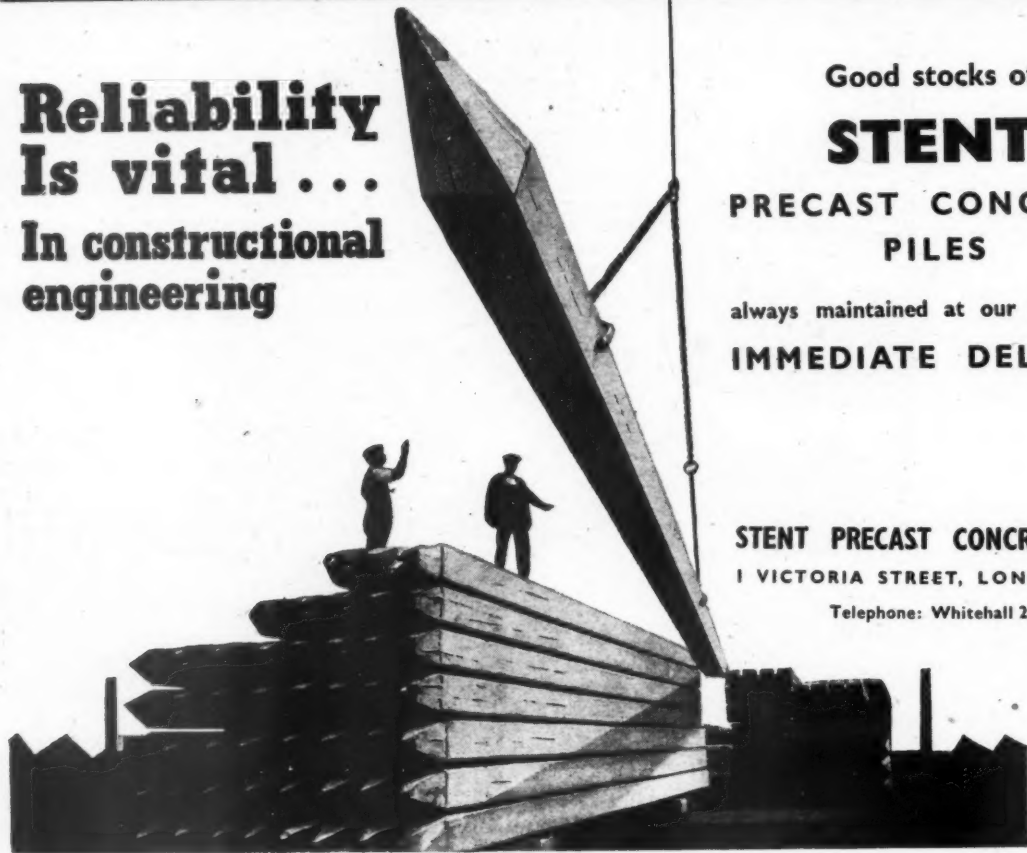
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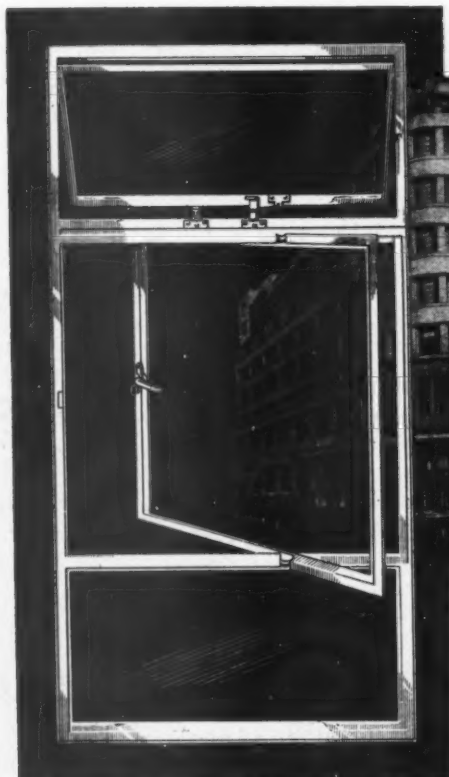


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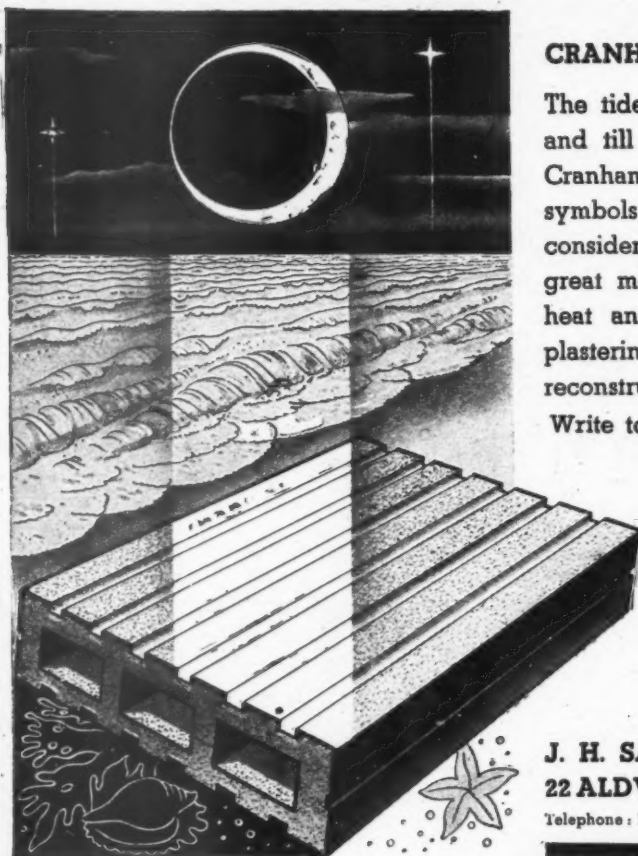
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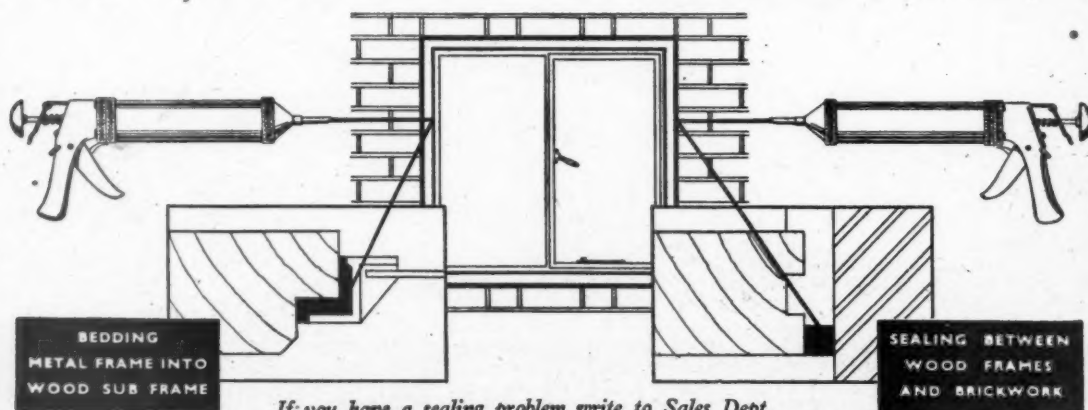
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DIARY FOR MARCH APRIL AND MAY

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by the initials as given in the glossary of abbreviations on the front cover.

BRIGHTON. *FMB Annual Conference.* HQ, the Hotel Metropole. (Sponsor, FMB.) MAR. 15-17

DAGENHAM. *Design and the Engineer.* A Series of Lectures. F. A. Taylor. *Industrial Uses of Colour.* March 10. A. E. Aikman. *Design in Steel and Concrete.* March 17. At the South-East Essex Technical College, Longbridge Road, Dagenham. (Sponsor, S.E. Essex Technical College.) All lectures begin at 7 p.m. MAR. 10-17

KINGSTON. *Timber Problems and the Architect.* At the Guildhall, Kingston-on-Thames. (Sponsor, Kingston-on-Thames Group of the SESA.) 7.30 p.m. MAR. 10

LIVERPOOL. R. T. Walters. *Designing in Timber.* In the Architecture Lecture Theatre, Liverpool University. (Sponsor, TDA.) 3 p.m. MAR. 8

LONDON. *Exhibition of Soviet Architecture.* At the RIBA, 66, Portland Place, W.1. (Sponsor, the Society for Cultural Relations with the USSR.) UNTIL MAR. 20

Exhibition of Photographs by Members. At the AA, 34/6, Bedford Square, W.C.1. (Sponsor, AA.) UNTIL MAR. 19

Ideal Home Exhibition. At Olympia. (Sponsor, The Daily Mail.) UNTIL MAR. 25

Exhibition: The Industrial Revolution in Art, 1760-1851. Arranged by Dr. F. D. Klingender in collaboration with the Newcomen Society. At Heal's Mansard Gallery, 196, Tottenham Court Road, W.1. UNTIL APR. 13

J. A. Hinks. *The Trend of Values of Real Estate in the Past Decade, and a Forecast.* At the Chartered Auctioneers' and Estate Agents' Institute, 29, Lincoln's Inn Fields, W.C.2. (Sponsor, CAEAL.) 6 p.m. MAR. 4

Frederick Gibberd. *The Aesthetic Possibilities of the New Towns.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Lunchtime Meeting. MAR. 4

Westminster Regained Exhibition. At the Tate Gallery, Millbank. (Sponsor, "The Architectural Review.") MAR. 10-APR. 6

Reception of Yugoslav Delegates. At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 5 p.m. MAR. 5

J. Seymour Lindsay. *Craftsmanship: Metalwork.* At the RSA, 6-8, John Adam Street, W.C.2. (Sponsor, RSA.) 2.30 p.m. MAR. 8

Sir Arthur Street. *The Public Corporation in British Experience.* At the RICS, 12 Great George Street, S.W.1. (Sponsor, RICS.) 5.30 p.m. MAR. 8

Howard Robertson. *The American Scene.* At the RIBA, 66, Portland Place, W.1. 6 p.m. (Sponsor, RIBA.) MAR. 9

Dr. S. H. Steinberg. *German Gothic Sculpture. 13th Century: Naumberg and Bamberg.* At the Courtauld Institute of Art, 20, Portman Square, W.1. (Sponsor, the Courtauld Institute.) 5.30 p.m. MAR. 9

Building Contractors' Plant. The Problems Associated with Its Use. A. B. Buck. *The General Foreman's View (ii).* At the LCC Brixton School of Building, Ferndale Road, S.W.4. 7.0 p.m. MAR. 10

LMBA Sixty-Fifth Area General Meeting. At Derry and Toms Restaurant, Kensington High Street, W.8. (Sponsor, LMBA.) Luncheon, 12.45 for 1 p.m. Meeting 2 p.m. MAR. 10

The Town and Country Planning Act, 1947. W. A. Wood. *The Act—Questions and Answers.* Association Members 1s. 6d.; Non-Members, 2s. At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 6.15 p.m. MAR. 10

Engineering and Industrial Equipment (Home and Export) Exhibition. At the Royal Horticultural Hall, Vincent Square, S.W.1. (Sponsor, British Bulletin of Commerce.) MAR. 10-24

S. J. Crispin. *A Comparative Study of Engineering.* At the ISE, 11, Upper Belgrave Street, S.W.1. (Sponsor, ISE.) 6 p.m. MAR. 11

Timber Brains Trust. At the RIBA, 66, Portland Place, W.1. (Sponsor, TDA.) 7.30 to 9.30 p.m. MAR. 15

Dr. S. H. Steinberg. *German Gothic Sculpture. 15th-16th Century: Lübeck.* At the Courtauld Institute of Art, 20, Portman Square, W.1. (Sponsor, the Courtauld Institute.) 5.30 p.m. MAR. 16

Dr. T. Bedford. *Air Hygiene.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. MAR. 23

Anthony Cox. *Public and Private Architecture.* At the AA, 24/6, Bedford Square, W.C.1. (Sponsor, AA.) 7.45 p.m. MAR. 24

NEWPORT. *RSI Newport Sessional Meeting.* A. Trevor Jones. *The Hospital Services of South Wales.* Afternoon visit to Newport Corporation Works at Talybont. At the Modern Secondary School, Stow Hill, Newport. (Sponsor, RSI.) 10 a.m. MAR. 6

NEWS

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Though no feature in the JOURNAL is without value for someone, there are often good reasons why certain news calls for special emphasis.

★ means spare a second for this, it will probably be worth it.

★★ means important news, for reasons which may or may not be obvious.

When the public inquiry into the LCC scheme to acquire 1,200 acres of land for HOUSING AT BOREHAM WOOD and Elstree was resumed at Watford, Mr. A. Capewell, K.C., questioned the wisdom of sacrificing London's green belt to satisfy the LCC's housing requirements.

Mr. Capewell said that there was a grave danger of the farming industry being driven away from Elstree—a situation which the Board of Trade might not favour in view of the increasing economic importance of that industry. Hertfordshire already had the satellite towns of Stevenage and Hemel Hempstead and possibly the new towns of Welwyn and Hatfield, in addition to 15,000 people being placed at Oxhey. It was time a halt was called to such development, which was putting a greater burden on Hertfordshire than on any other county.

Mr. C. H. Walker, Director of Housing and Valuer to the LCC, admitted that in defining the new layout a number of properties would have to be altered, and in some cases substantial houses pulled down. He agreed that 57 per cent. of the local inhabitants were against the proposals.

The 8/9ths you don't see!



8/9ths of an iceberg, as you may remember, hides itself beneath the surface. And, similarly, there is a great deal of work behind a *really* comprehensive Timber Service that is condemned to 'blush unseen' ... such as the example we show here: the equipment and expert attention necessary for Bandsaw maintenance. But the satisfying thing with Morris is that you can be sure these vital factors in service are all present and correct.

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From AN ARCHITECT'S Commonplace Book

THE LAW-GIVERS. [From *Stuart and Georgian Churches*, by Marcus Whiffen (B. T. Batsford, Ltd.).] Classical theorists, from the early Renaissance on, were at pains to show that the laws of proportion might be expressed in mathematical terms—"natural beauty is from Geometry," wrote Wren—and classical architects often consciously founded their practice on precepts thus evolved. But the real law-givers here were the "orders," Doric, Ionic and Corinthian, with their variants Tuscan and Composite. "The Orders of Architecture," wrote Sir William Chambers, "are the basis upon which the whole part of the art is chiefly built, and towards which the attention of the artist must ever be directed, even where no orders are introduced." Thus not only did "orders" seem to the classicist a *sine qua non* of any architecture worthy of the name—it is notorious that Batty Langley invented a set of Gothic orders—but the proportions of the classical orders, as laid down by Vitruvius, became so deeply imbedded in his artistic consciousness that he could only with the greatest difficulty escape from them. And so it comes about that as we look at an early Gothic Revival church we are aware that in the somewhat inadequate shadow of every buttress there lurks the ghost of a classical pilaster.

Fourteen nations will be represented at the INTERNATIONAL LANDSCAPE CONFERENCE and Exhibition, organised by the Institute of Landscape Architects, to be opened at the County Hall, London, S.E.1, on August 9.

The theme of the Conference and Exhibition is "The Work of the Landscape Architect in relation to Society," and during the four-day conference, lasting from August 9 to 12, British and foreign delegates will discuss such subjects as the evolution of landscape, its economics and its relation to industry, leisure and housing.

The British speakers will include Mr. Thomas Sharp, Past President of the Town Planning Institute, Mr. G. A. Jellicoe, President of the Institute of Landscape Architects, Mr. James W. R. Adams, County Planning Officer for Kent, Mr. H. F. Clark, Lecturer on Landscape Architecture at Reading University, Mr. Clough Williams-Ellis and Miss J. G. Ledebor, while foreign speakers will include Mr. Leon Zach, representing the USA, who is Director of Site Planning in the US War Department, M. Holger Blom, representing Sweden, who is Chief of the Parks Department, Stockholm, and Professor Rene Pechere, Professor of Town Planning

at Brussels University. Other nations represented will be France, Norway, Denmark, Switzerland, Canada, Spain, Poland, Italy, Holland and Uruguay.

"The Landscape of Work and Leisure" is the title of the accompanying exhibition, which will remain open to the public until August 21. For the first time in England, the development of landscape architecture as a profession all over the world will be fully demonstrated. An outstanding section on the British side will be on factory and industrial landscape, including the work of the Miners' Welfare Commission.

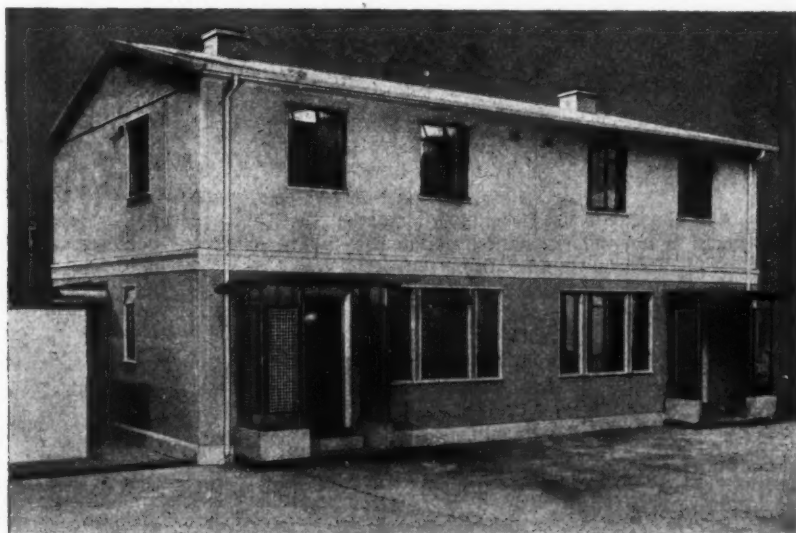
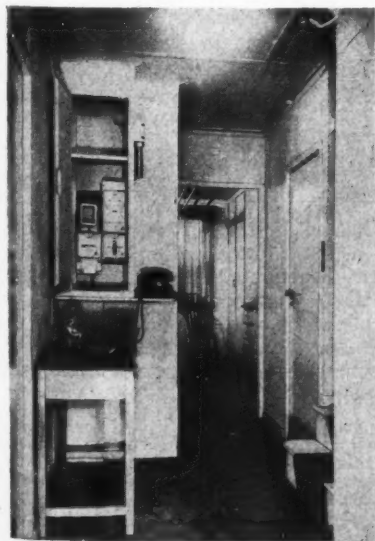
Mr. Peter Shephard, B.Arch., A.R.I.B.A., A.M.P.T.I., has been appointed deputy to Mr. Clifford Holliday, the Chief Architect and Planner of the New Town at Stevenage.

Trained under the late Professor Reilly at Liverpool University, Mr. Shephard, in 1943, joined Sir Patrick Abercrombie's team of planners who produced the Greater London Plan. Two years later he joined the Ministry of Town and Country Planning Technical staff and, under Mr. Gordon Stephenson

he worked on the draft Stevenage Plan. During the early part of the war he worked on the building of Royal Ordnance Factories for the Ministry of Supply. Other Appointments in the Architect's department are: Mrs. Rosemary Stjernstedt, A.R.I.B.A., Mr. A. K. Adam, A.D.A.D., D.I.U.P. (Paris), Mr. Leonard Manasseh, A.R.I.B.A., A.A.D.P., and Mr. Oliver C. F. Carey, A.R.I.B.A.

The Organising Committee of the XIV OLYMPIAD have expressed their satisfaction with the large entry for the INTERNATIONAL ARCHITECTURAL COMPETITION.

The entries are limited to designs for buildings connected with sport. All work must have been executed during the course of the XIII Olympiad, i.e., after January 1, 1944, and must be sent in by May 15. Designs may be of two types: buildings or planning layouts, and three designs of each type will be selected by the National Architecture Committee. These six designs will then be judged by the International Architecture Committee. All works selected will be on exhibition at the Victoria and Albert Museum from July 15 to August 14.



At the Ideal Homes Exhibition, which opened on March 2, can be seen for the first time a two-storey aluminium factory-built house. Left, a view of the entrance hall, showing the compact electric meter cupboard. Right, an exterior view. The reduced proportion of height to length is due to the adoption of a 7 ft. 6 in. floor to ceiling height.



Photo Album: Opportunity for Improvement

Now that the canals have been nationalized, the Docks and Inland Waterways Executive of the British Transport Commission have a unique opportunity to make their appearance as attractive as it deserves. Towpaths should be made readily accessible to the public and planted freely with trees and flowers. All this would give added colour and delight to the waterside scene, whose enjoyment is a pleasure traditional on the continent, but so often uncared for.

ingly neglected in England despite its unrivalled canal network, which could be made into a walkers' way extending over the whole of the countryside. The view of the Paddington Basin on the Grand Union Canal shows how much could be made of the towpath with the bold curve of its bank, the fine vista, and the sweep of the neighbouring terrace. Instead it is uncared for, unkempt, colourless and depressing.

The Council of the TPI announces that the TWENTY-SECOND ANNUAL COUNTRY MEETING of the Institute will be held in EDINBURGH, from June 4 to 6, inclusive, under the Chairmanship of the President, Mr. J. R.

Howard Roberts, C.B.E., (L.M.).

The meeting will open at 10 a.m. on Friday morning, June 4, and papers of town and country planning interest will be read and discussed in morning and afternoon sessions; the Rt. Hon. the Lord Provost of Edinburgh will hold a reception at the City Chambers on Friday evening; visits will be made to places of planning interest in Edinburgh on Saturday morning; the Institute Dinner (or

similar function) will be held on the Saturday evening, and on Sunday the meeting will conclude with a whole-day tour by motor coach with lunch at Pitlochry and tea at St. Fillans, arriving back in Edinburgh at about 7.30 p.m. Those who propose to attend the meeting should inform the secretary of the TPI not later than March 31, and a programme with details of charges will then be forwarded.

★ **STUDENTS** will spend their summer holidays **HELPING TO BUILD** the new town at Stevenage if arrangements made by the National Union of Students and the Stevenage Development Corporation are approved by the Ministries concerned.

The student volunteers will be asked to help in a social survey of the existing town, a topographical survey, certain demolition and reinstatement work at the Aston H.Q. of the Corporation, and the improvement of vital roads within the designated area. This programme of work is expected to extend over three months and may involve seventy students, including a proportion of women students. There will be no objection by the Corporation to the inclusion in this party of a percentage of foreign students. The students will probably work a five-day week at rates of pay still to be determined. Accommodation will be provided for men and women by the Corporation in an ex-ATS camp in the grounds of the Corporation's headquarters at Aston. The NUS will arrange the feeding of the volunteer party. The official attitude to voluntary labour will determine the fate of the scheme. Restrictions at present imposed on new towns allow Stevenage a Labour Quota of 75. If this voluntary student labour force will not be counted as part of the year's quota, the scheme will go ahead. An official of the National Union of Students stated that approaches have also been made to the other new towns, and, if the scheme goes through, they are confident that students from all over Britain will respond in great numbers.

NEWS IN BRIEF

Glencoyne Park, Cumberland, has been given to the National Trust by the children of Sir Samuel H. Scott. The total area is 2,260 acres and joins two existing Trust properties.

2,000 acres of land near Thetford, Norfolk, are to be acquired by the War Department, in place of the original figure of 23,400 acres. This is to be used as an armoured training ground. In the Stamford area a further 9,000 acres have been taken, in addition to the original 18,000.

Jane Austen's House, for the purchase of which an appeal was made in the JOURNAL over a year ago, has been bought by Mr. J. E. Carpenter, in memory of his son, and the house will be handed over to trustees appointed by the Jane Austen Society. The money subscribed will be used for repairs.

The acquisition of Hurlingham Club grounds by the London County Council was the subject of the public inquiry which was opened at Fulham Town Hall on February 17 by Mr. E. Fitzgibbon, an inspector of the MOTCP.

John Wood the elder, of Bath, it has been discovered from a contemporary letter, was the architect for Capesthorpe Hall in East Cheshire in 1722. Hitherto, no building of Wood's design has been known prior to 1726.

The West Essex Chapter of the Essex, Cambridgeshire and Herts Society of Architects held their 22nd Annual General Meeting on February 10, and Mr. R. O. Foster was elected chairman for 1948.

Merseyside's building rate by municipal authorities for the month of January was the third highest monthly total since the war. 170 permanent houses were completed.

BUILDING FOR AGRICULTURE

THE National Farm Survey showed that only 39 per cent. of farm buildings in England and Wales are in good condition. Moreover this description refers only to structural condition and not to suitability. Lord Addison has estimated that the capital requirements of agriculture are £500 million. A large part of this figure is represented by buildings and yards. There is some hope that farm buildings will have high priority in the queue for building licences, and indeed this is promised in the Cripps White Paper. The subject is, therefore, one of considerable interest to architects in these days of shrinking practices.

The majority of farm buildings in the British Isles have been designed to serve the needs of farmers engaged in what is known as mixed farming, based on a four-course rotation. There have always, of course, been major and minor variations in styles of farm building, determined by climatic and other factors—a Welsh live stock farm requires buildings completely different from the intensive arable holdings of the Eastern Counties—and there are also the regional differences of building method, from the brick and tile of Sussex through the straw thatch and chalk walls of the west to granite and slates in the northern counties. But the variations in actual farming methods have never been so considerable as today. This is because, as "scientific" farming has been developed, there has been an increasing tendency to specialise in whatever kind of farming is particularly suited to the climate and topography of the area, with the aid of artificial manures and imported foodstuffs. Individual balanced farms have not been encouraged by prevailing economic conditions. Now, however, with a subsidised agriculture, the tendency is towards a more balanced livestock and arable farm. Since the great boom in farm building which was largely stimulated by the Prince Consort, architects have played but a small part in the development of housing for beasts, for agricultural products and for equipment which has taken place in the last hundred years.

There are signs today however, that farmers, following the prospect of a settled agricultural outlook for some years to come, are beginning to take an interest in re-equipping their farms, and seeking technical advice to help them to do so. One indication of this interest is the recent book on farm buildings published by the weekly *Farmer & Stockbreeder*.* The recently announced scheme for the mass-production of components for farm buildings sponsored by the Ministry of Agriculture† provides a technical basis.

The new advisory service of the Ministry of Agriculture gives some help to farmers in dealing with their building problems, but there is also much work left to be done by architects who are prepared to examine the special problems involved. Economic factors necessitate the re-equipping of farms piece-

* New Ideas for Farm Buildings. *Farmer & Stockbreeder* 30s.
† See p. 215-6 of this issue.

meal; the complete farm grows little by little. In all too many cases, however, it is found that the part just completed has made more difficult the layout of the next stage. The first need, therefore, is for a general development plan. This must be flexible to allow for changes in the balance of agricultural output, though flexibility may be achieved by the use of a type of building that is readily convertible. The architect can also help to harmonise the buildings with the regional pattern.

Finally there is the most vital service of all, the provision of adequate cottages for farm workers. Though in general licensing difficulties may make the building of new cottages difficult, there are many thousands of existing cottages where the intervention of the architect on the humble task of adding bathrooms, and improving the accommodation generally can be of great value. All wealth in the last resort derives from the land, and those who labour to win it deserve the best that architects can devise for them.



The Architects' Journal

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N O T E S & T O P I C S

THE COST OF THE TEMPORARIES

Most of the squawk about the cost of the "temporaries" has been concentrated on the Airoh house, but a study of the recent White Paper shows that the costs of the others have jumped quite a lot as well, from £1,043 to £1,168. The biggest single factor seems to be transport and storage, which comes out at £135 a house, more than half this figure being due to extra storage space which had to be built to meet the unbalanced production of components. An overall cost increase of about 12 per cent. between 1945 and 1947 seems a not unreasonable estimate. The glaring fault is that the cost seems to be about £2 a square foot, against the 24s. with which local authorities are expected to provide permanent houses.

Nobody would pretend that prefabricated systems of building are in anything but the preliminary stages, but it is a pity that the public thinks of "prefabricated" as meaning the same thing as "temporary," and it is still worse that the public also thinks it inevitably means expensive.

In America, for instance, our housing programme has been dubbed "a Political Frankenstein" by the private builders, who are organizing opposition to the new Public Housing Bill now before Congress. "Imagine the golden opportunities in New York alone," writes the author of a pamphlet called *What Public Housing Did to England*. "Commissions, fees, profits, jobs and finally apartments for voters. It is a bonanza beyond the wildest dreams of the most optimistic politician." Other objects of attack are "the tenants lobby"—remember the rent-payers strike at Birmingham in 1939?—rising costs and the extension of bureaucracy into other fields once an immediate target has been reached.

Much of this comment is fair enough. Obviously there are enormous possibilities in public housing for political exploitation and abuse, and it is also fair to remind us that the operating costs of all our official housing departments are expenses of the housing programme which are not to be ignored merely because they are hidden. Where the authors of the pamphlet weaken their case is in their attack upon

the rising official standards of accommodation and quality—which they dismiss as criminal extravagance—and upon the extension of officialdom from slum clearance into the wider fields, such as reducing overcrowding, which they attribute to megalomania and job-justifying on the part of bureaucrats.

What success these American opponents of public housing will have remains to be seen, but it seems unlikely that they will prevail over those more enlightened experts who realize that the contributions to public housing of the USA have not to date been of very great value and are aware that there are as many good lessons as bad to be learnt from English experience.

RIISING COSTS

Ever since the end of the war architects have been complaining about increasing costs and contractors have been retorting with decreased output per man. Now the *Economist* has managed to get some figures from an anonymous contractor, who gives 1,661 man-hours per house in 1936 and 2,795 in 1946, though the latter is for a house of about 5 per cent. greater area. The main output loss seems to be in the bricklaying, carpentering, plastering and painting trades.

These poor figures, of course, are pre-incentive, but it is claimed that they were not due to material shortages or mismanagement. It is too early to tell the difference bonus payments have made; some districts report a 40 per cent. increase in output; the *Economist* guesses 20 to 25 as a fair average. Perhaps the Research Committee recently set up by MOW could investigate these interesting figures.

RAILWAY COLOURS

If there is one thing besides public statuary that the British people is really enthusiastic about it is railway engines. Thousands of suggestions were received from the public for the colour schemes of the new British Railways rolling-stock, and the Railway Executive has wisely decided to test out some of these suggestions upon eight experimental trains.

It is a pity, however, that colours are to vary in future with types of trains

LETTERS

Cecil C. Handisyde, A.R.I.B.A.

A. F. Hare, A.R.I.B.A.

Information Sheet 26.A1;
Lead D.P.C.s and Cloaks to
Cavity Walls

SIR.—The popularity of your weekly Information Sheets was well illustrated by the fact that before lunchtime on the day of your issue of February 12, out of five architects to whom I spoke, four had already noticed the entirely redundant damp-proof course shown at the top of an 11-inch cavity wall with eaves. All agreed that this particular form of excess enthusiasm by the sales department was distinctly unfortunate.

A more interesting point which this particular sheet raises is in the text, where the wording about the possibilities of corrosion of lead by lime and cement mortar is not perhaps quite as definite as could be wished. It would be most valuable if a precise and authoritative answer could be given to the following questions:—

(1) Is the attack by lime and cement sufficiently serious to demand some treatment in all cases, or does this only apply in such situations as thick walls which may remain damp for some considerable time?

(2) Has the suggested treatment of painting the lead with bituminous paint on both sides been carried out to any extent, and if so, has it proved a practicable method?

(3) Is there a reliable amount of actual evidence as to the importance of this type of corrosion, or is the recent stressing of this point based mainly upon theoretical probability?

CECIL C. HANDISYDE

The Editor of the Library replies: The need for the d.p.c. at the top of the wall depends upon the degree of protection afforded to the top of the external skin by the eaves. If the eaves projection is small, as in the case illustrated, then it is reasonable to suppose that the brickwork could become damp, even at the top, and in addition to the roof plate being exposed to damp, moisture would be conveyed by the layer of bricks closing the cavity of the inner skin of the wall.

Mr. Handisyde can rest assured that influence on technical matters by Sales Department enthusiasts is stringently guarded against in the preparation of Information Sheets.

An authoritative reference to the question of the corrosion of lead by fresh Portland cement mortar and fresh lime is the Building Research Bulletin No. 6, *The Prevention of Corrosion of Lead in Buildings*. In this work the emphasis is placed on the risk of corrosion to lead buried in thick masonry. The LIDC report that since the publication of Bulletin No. 6 there have been sufficient examples noted of corrosion to lead by fresh cement to suggest that the risk is not merely theoretical. As it is reasonably clear that the risk of corrosion is dependent upon conditions where the carbonation of the lime is slow and moisture is present, it will be appreciated that there can be no real guide in determining to what extent such conditions will arise in practice. In the interests of good practice, therefore, it is necessary



In Walton Place, down the centre of which runs the boundary between Chelsea and Kensington, both the authorities concerned have been carrying out repairs and redecorations to their requisitioned property. On the south side—i.e., in Chelsea, damaged cornices are being removed (left). In Kensington, on the other hand (right), they are apparently being renewed. Those who suspect that these opposing policies are dictated by some party bias may like to be reminded that there is a conservative majority in both.

and not, as at present, with geographical areas, which, says the Executive, "would interfere with flexibility." How unromantic and unimaginative a point of view is this. Can the directors not picture the excitement of seeing an engine in GWR livery drawing in upon a rare visit to Doncaster? It would start more letters to *The Times* than the sight of an avocet at Bungay. As for the suggestion that geographical areas could be emphasized by painting nameboards in different colours, this is lunacy. Even the strongest opponents of standardization would agree, I think, that the station nameboard is the one item of equipment which *must* be standardized in colour, form and lettering. Over to you, Barman, for information and action.

A NICE CUP OF TEAGUE

What with new colour schemes, new refreshment rooms, re-styled booking halls (see a recent AJ), British Railways are beginning to catch up on the Loewy-to-look-at railways of the USA. They have a long way to go yet, however. Last week the *Evening Standard* had an interview about the modernized refreshment rooms with one of the Railway Executive's catering officers. "The new furniture is made of aluminium and leather cloth," he said, "but the metal part is coated with a solution which makes it look like grained wood. The customers prefer the wooden appearance." No won-

der that Mr. Loewy is opening up a London office shortly, and that one of his most successful rivals, Walter Dorwin Teague, has fired another opening shot by issuing over here his book on industrial design.* Looks as if British designers had better call all Hands on Deck—including Lonsdale.

When industrial stylists write books they all too often start with a rather perfunctory curtsy at the Parthenon, get all steamed up about the Pont du Gard, and then go straight on to air liners and the ships. Mr. Teague follows the blazed trail, but though he knows his *Vers Une Architecture*, he has obviously read a lot of other books as well and, perhaps because he is a designer rather than a "stylist," has worked out a story of his own. As a designer he has plenty of imagination, but he can keep his feet on the ground when re-designing a milling machine and he can keep off that "Design for a transatlantic liner of 1975." With architecture—which to Mr. Teague is merely a sub-section of the industrial designer's job—he is less successful (if one can judge from photographs). My advice—like that of Pugin's to Paxton—is, "Stick to milling machines, Mr. Teague, and leave architecture to architects."

ASTRAGAL

* Design this day by Walter Dorwin Teague. The Studio. 35a.

WOODWORK FOR THE COMMONS



These photographs show some of the hand-carving now being carried out in the workshops of J. L. Green and Vardy for the new House of Commons. Several hundred feet of friezes and panels are required to complete the design of Sir Giles Gilbert Scott. The amount of work can be judged from the fact that of 12,500 gross cub. ft. of timber, only 8,500 cub. ft. will be used in the finished design. The oak has been selected by Sir Giles from trees grown near Newport, in Shropshire; it has been kiln-dried by a special process, being first saturated in a steam bath, and then dried evenly throughout. This avoids the formation of a hard skin on the wood, above a soft interior, which used to cause so much trouble to woodcarvers. However, no satisfactory method of seasoning large timber has been found to ensure against future distortion, so no oak is used more than 4 in. thick. The oak beams in the ceiling are, therefore, built up of oak planks on a silver spruce core. The wood, having been machine sawn and planed to the correct sizes, then has the design stencilled on it, and a fret saw cuts the basic pattern. The wood is then given to the craftsman to carve. Illustrated above is such a piece of wood, still showing the stencil marks and machine cuts, and, centre, the same detail in its finished state. Bottom, a craftsman carving part of the frieze. This partial mechanization of carved ornament is open to the criticism that the repetition of a uniform design throughout a long frieze has too much the character of machine production. Since hand craftsmen are employed, it would be in the tradition of the great carvers to allow the craftsmen a certain freedom of detail.

to advocate the use of some protection to the lead in general.

With regard to the use of bituminous paint to afford the protection during the initial stages whilst the lime is active, since this was suggested in the BRS report and in subsequent references, no examples have been brought to the notice of the LIDC of its being inadequate; on the other hand, no evidence for its extensive use is available. For the protection of lead pipes other methods are often used, for example, the wrapping of the pipes with building paper.

Aluminium Schools

SIR.—Apparently your correspondent, Mr. Norman J. Wigley, in his letter published in your issue for February 12, assumes that a sufficiency of bricks satisfies all the requirements of modern building construction, even that so often referred to as Traditional Construction. Even if an adequate number of bricklayers are available for schools and like projects, there are obviously many other items of the structure and cladding which must be considered.

Most designers interested in prefabrication realize that in comparison with orthodox building it is an experimental stage; but nevertheless at a stage where, if considered in the proper perspective by the whole building industry, can play a contributory part in the reconstruction programme.

Prefabrication in aluminium or other materials is not necessarily an alternative to traditional construction, but should be considered as an adjunct.

All materials and methods must eventually be considered on their merits for each particular application. Brickwork, with its great advantage of experience, will surely not suffer when used in association with newer materials.

The first large scale project of prefabrication in aluminium, included in the Temporary House Programme, was primarily considered, at least by the designers, as a means of providing a number of dwellings using, wherever possible, materials and labour which would not affect the overburdened building industry. That was the specific requirement at the time of its conception. Future developments, however, will employ aluminium only where its inherent characteristics fulfil a function more adequately than other materials.

The cost also will compare favourably when considered from all aspects, erection, maintenance, etc. Even in the Aluminium House, where the metal is used for the complete structure, it probably does not account for more than 25 per cent. of the total cost of the house as quoted in the White Paper.

During the present interim period, when traditional methods are not always possible owing to shortage of steel, timber, craftsmen, etc., aluminium must play a decisive part. The properties of aluminium render it a particularly desirable material for rapid fabrication, and it is, therefore, natural that complete factory produced projects in aluminium will be envisaged. I feel sure, however, that most architects will, in the long term, employ aluminium prefabrication for that portion of the structure where its merits are indisputable and, therefore, in conjunction with other materials, whether they be brick, timber or concrete.

Whilst one regrets that, in most projects, it is not possible to report that "services and material are available to cover requirements in traditional form," surely such apparent antagonism to a younger member of the building industry must be prejudicial to both the immediate and future programmes.

A. F. HARE,
Consultant Architect to S.M.D.
Engineers, Ltd., designers of
the Alcrete Construction for
Schools.

London.

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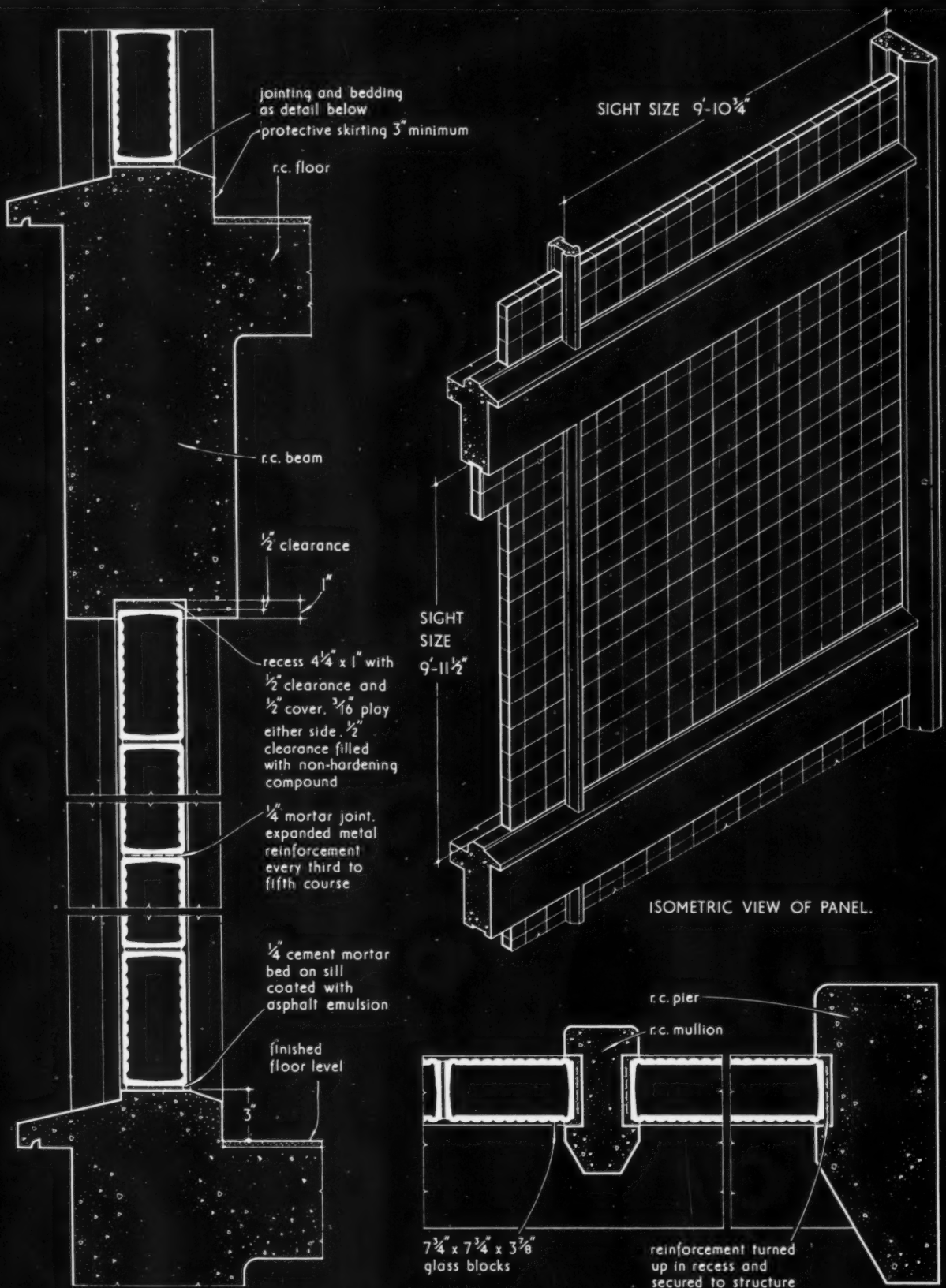
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BUILDING BLOCKS | GLASS | APPLICATIONS

14.N2

The Architects' Journal Library of Information Sheets 45. Editor: Cotterell Butler, A.R.I.B.A.

VERTICAL AND HORIZONTAL SECTIONS THRO' PANEL. (scale: 1 $\frac{1}{2}$ " = 1'-0")

CONSTRUCTION OF INSULIGHT HOLLOW GLASS BLOCK EXTERNAL PANELS IN R.C. FRAME.

14.N2 ·INSULIGHT· HOLLOW GLASS BLOCKS

This Sheet describes the construction of hollow glass block external panels in a reinforced concrete frame. Sheet 14.M1 gives standard shapes and sizes of blocks together with tables of dimensions of openings to accommodate panels up to 20 ft. high or 20 ft. wide, and area not more than 120 ft. super. Sheet 14.N1 describes the general construction of external panels using hollow glass blocks.

Construction

The isometric view shows a third of a typical hollow glass block panel approximately 30 ft. long by 10 ft. high. The section and plan illustrate reinforced concrete profiles which would represent reasonable practice. No reinforcement has been shown as this would involve considerations beyond the scope of this Sheet.

The reinforced concrete framework is part of the whole building construction. It has to be designed for the dead weight which falls on it and for the specified floor and wind loads in accordance with standard practice.

The transmission of any load from the building to the glass block panels must be avoided.

The mullions (and transoms if any are included) should be so designed that they are capable of transmitting to the main frame, without visible deformation, the deadweight and wind loads arising from the glass block panels. The mullions are too slender to be used as part of the main framework; nevertheless, if they are monolithic with it, it is unavoidable that they act as intermediate supports to the main beams. Provision should be made in the arrangement of the reinforcement of these beams for the possible effects of intermediate supports formed by the mullions.

The dimensions of the main beams and columns may vary within wide limits depending on the loads to be carried and the quality of concrete specified. In view of the small size and rather complicated shape of the mullions it may be preferable to precast them. In this case pockets should be left in the main beams into which the precast mullions are inserted. Thus they can safely be relieved of any dead load from the structure.

Panel Sizes

Insulight hollow glass blocks are non-loadbearing units, and although they will carry their own weight safely up to a reasonable height it is necessary because of wind pressure and other stresses to put intermediate support in panels where the height is more than 20 ft., the width more than 20 ft. or the area more than 120 ft. super. These dimensions may be exceeded for internal panels in certain cases.

Fixing

Treatment at head and jambs: In all panels, the head and sides must be built free of the main structure—except for the reinforcement—to prevent panels being subjected to strains due to settlement, building load, or expansion. A $\frac{1}{2}$ in. clearance should be provided which must be kept free of mortar spillings, and

filled with a non-hardening compound. In cases where intermediate support or structural dividing members are introduced into panels, the glass blocks must be insulated by clearance joints. In external panels, recesses into which the head and sides are built free of the main structure must be provided, except where the dimensions of the panel do not exceed 8 ft. high by 2 ft. wide, or 6 ft. high by 3 ft. wide. The recess should be $4\frac{1}{2}$ in. wide by 1 in. deep, allowing $\frac{1}{2}$ in. clearance and $\frac{1}{2}$ in. cover with $\frac{3}{8}$ in. play on either face; the $\frac{1}{2}$ in. clearance should be filled with a non-hardening compound to provide a weatherproof joint. Where intermediate supports are introduced, it is not essential to provide recesses in these.

In internal panels, rebate fixing is recommended: in certain cases butt fixing can be used.

Treatment at sill: Before the bottom course is laid, the sill should be coated with an asphalt emulsion or similar material, and the blocks then bedded with mortar as specified below, so as to allow for slight movement without disrupting the mortar bed and thereby preserving the weather-resistance of the panel.

Reinforcement: Reinforcing strips should be built into every third to every fifth course dependent on the size and position of the panel. The ends should pass through the clearance joint and be secured to the main structure. Such a material as "Exmet" $2\frac{1}{2}$ in. wide No. 20 gauge expanded metal has been found suitable for this purpose.

Bedding and pointing: As glass blocks are non-absorbent a fairly dry and fatty mortar should be used. A suitable mix is one part Portland cement, one part hydrated lime (preferably lime putty) and four parts of sand by volume. Clean builders' sand free from gravel (not sea sand) should be used. The face of the joints may be struck back and smoothed during erection. If coloured joints are required they may either be picked out in colour by painting after the mortar is thoroughly dry or raked out at the time of erection and later pointed with coloured cement. The pointing may be of any form or finish; a keyed joint formed with a curved jointing tool is the normal one.

Doorways, windows and ventilators: Small windows and ventilators may be set in a panel as insets. Doors and larger windows require clearance joints and special treatment.

Further Information

The Manufacturers maintain a Technical Research and Information Bureau which is available to answer questions and advise on technical problems dealing with this subject generally.

Compiled from information supplied by:

Pilkington Brothers Ltd.

Head Office: St. Helens, Lancashire.

Telephone: St. Helens 4001.

London Office: 63, Piccadilly, W.1.

Telephone: Regent 4281.

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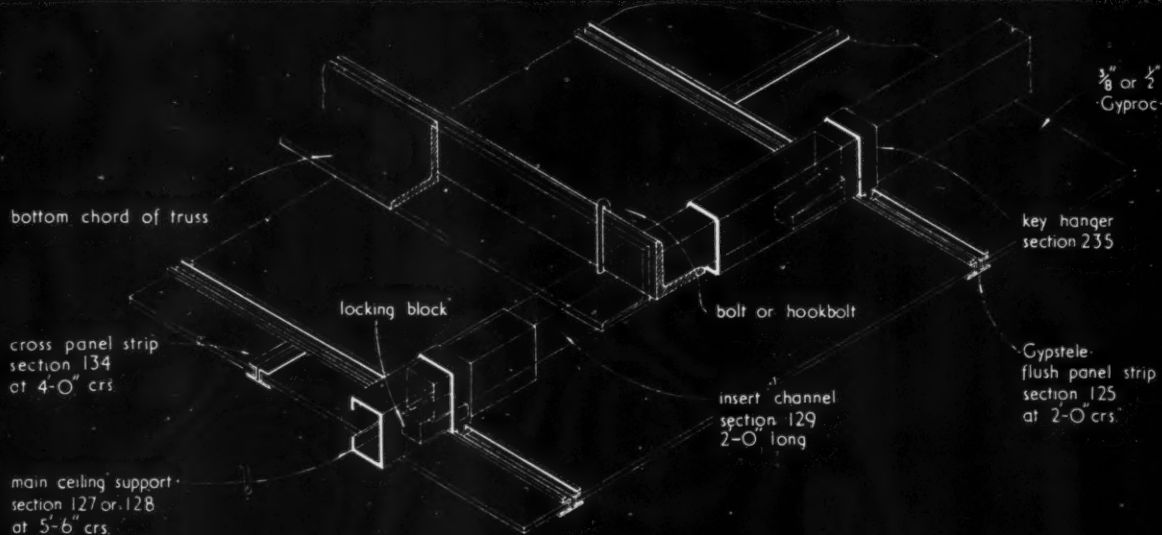
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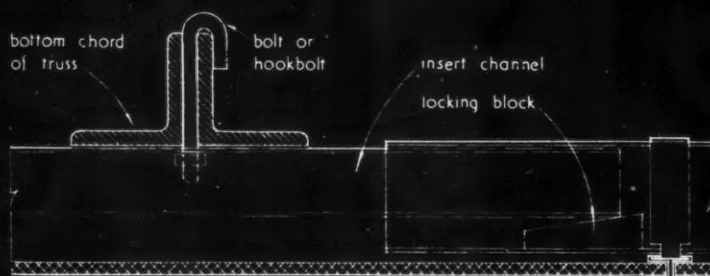
CEILINGS | PLASTER BOARD

22.E1

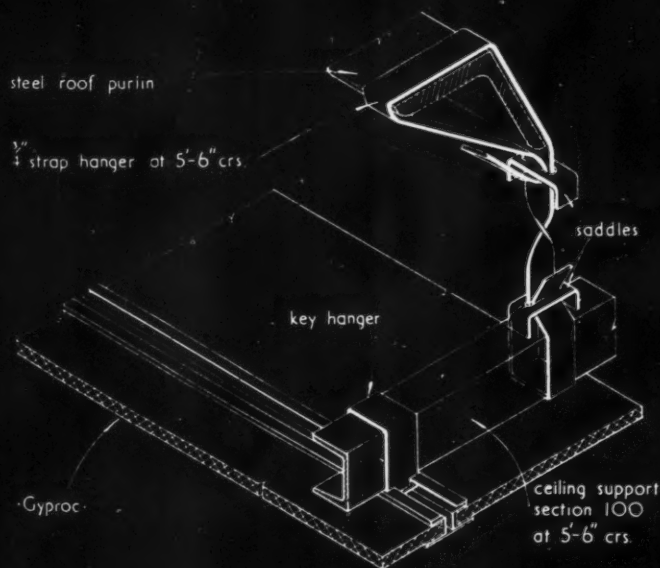
The Architects' Journal Library of Information Sheets 46. Editor: Cotterell Butler, A.R.I.B.A.



ISOMETRIC VIEW OF SUSPENSION FROM BOTTOM CHORD OF TRUSS.



SECTIONS AT RIGHT ANGLES AND PARALLEL TO TRUSS.



ISOMETRIC VIEW OF SUSPENSION FROM STEEL ROOF PURLINS.



ALTERNATIVE FINISHES AT WALL JUNCTION.



SECTION AT RIGHT ANGLES TO TRUSS ANGLE.

SECTION PARALLEL TO TRUSS ANGLE.

22.E1 GYPSTELE SUSPENDED CEILINGS

This Sheet is the first of two dealing with Gypstele ceilings and describes Gypstele suspended ceilings. Sheet 22.E2 will describe the ceiling fixed direct to roof members. Both Sheets supersede previous Sheets in the original Library on the same subject : Nos. 958 and 959.

General System

Gypstele ceilings combine the use of Gyproc fire-resisting plasterboard as panels with patented mild steel suspension and jointing members, forming light-weight structurally strong linings.

The ceilings may be hung from any type of construction and the depth of suspension may be adjusted to suit requirements.

Where abnormal conditions of moisture occur, *i.e.*, in bath-houses, laundries, cook-houses, etc., it is recommended that primed Gyproc be used.

Suspension

Two methods of suspension are illustrated on the face of this Sheet. In the first method the main ceiling support channels are secured to an insert channel hook-bolted to the bottom chord of the truss, and the flush panel strips securing the Gyproc panels are attached to the main ceiling support by key hangers.

In the second method the main ceiling support is suspended by means of $\frac{3}{4}$ -in. strap hangers at 5 ft. 6 in. centres, and the flush panel strips securing the Gyproc panels are attached to the main ceiling support. In addition, the flush panel strip may be similarly supported from intermediate channels or the bottom angles of a truss.

A summary of methods for attaching strap hangers to structural roof or floor members is shown on Sheet 26.J3.

The Gyproc panels are 4 ft. 0 in. by 2 ft. 0 in. by $\frac{3}{8}$ in. or $\frac{1}{2}$ in. thick, and weigh 14 and 20 lb. per 'yard super, respectively. The panels may be cut to special sizes with an ordinary handsaw.

Finish

The protective finish of the metal flush panel strips allows the use of the same paint or distemper as for panels.

Trade Name

This is a proprietary system manufactured under the registered trade mark Gypstele.

Compiled from information supplied by :

Gyproc Products, Ltd.

Head Office : Westfield, Upper Singlewell Road, Gravesend, Kent.

Telephone : Gravesend 4251-4.

Telegrams : Gyproc, Gravesend.

London Office : Morris House, Jermyn Street, London, S.W.1.

Telephone : Whitehall 9821-5.

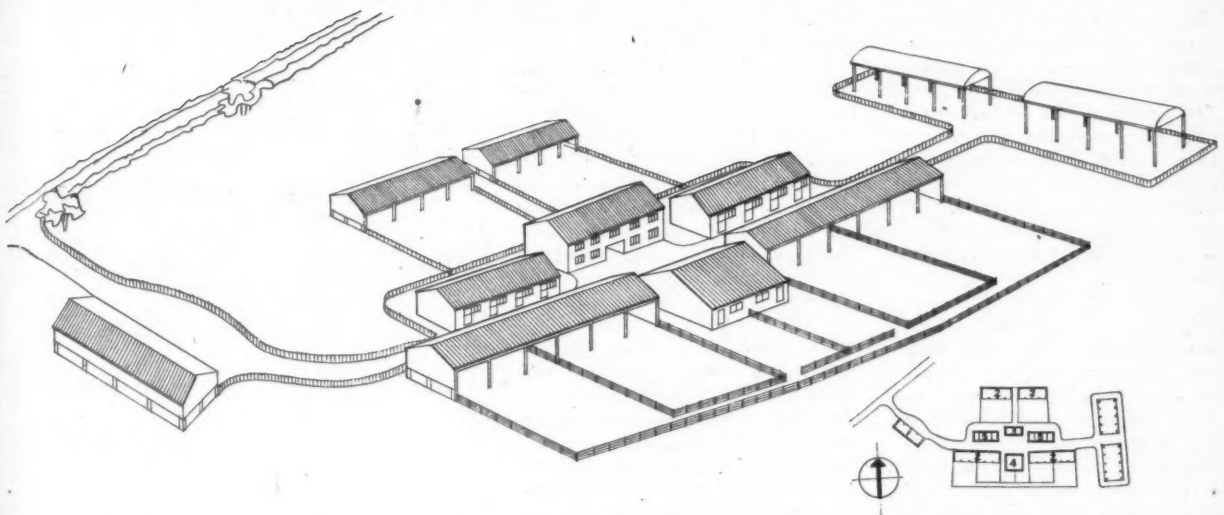
Glasgow Office : Gyproc Wharf, Shieldhall, Glasgow, S.W.1.

Telephone : Govan 614-6.

Telegrams : Gyproc, Glasgow.

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Editor: Cottrell Butler, A.R.I.B.A.



Hypothetical lay-out making use of the standard units. 1. Implement shed, 2. Stock yards, 3. Granary, 4. Milking house, 5. Loose boxes.

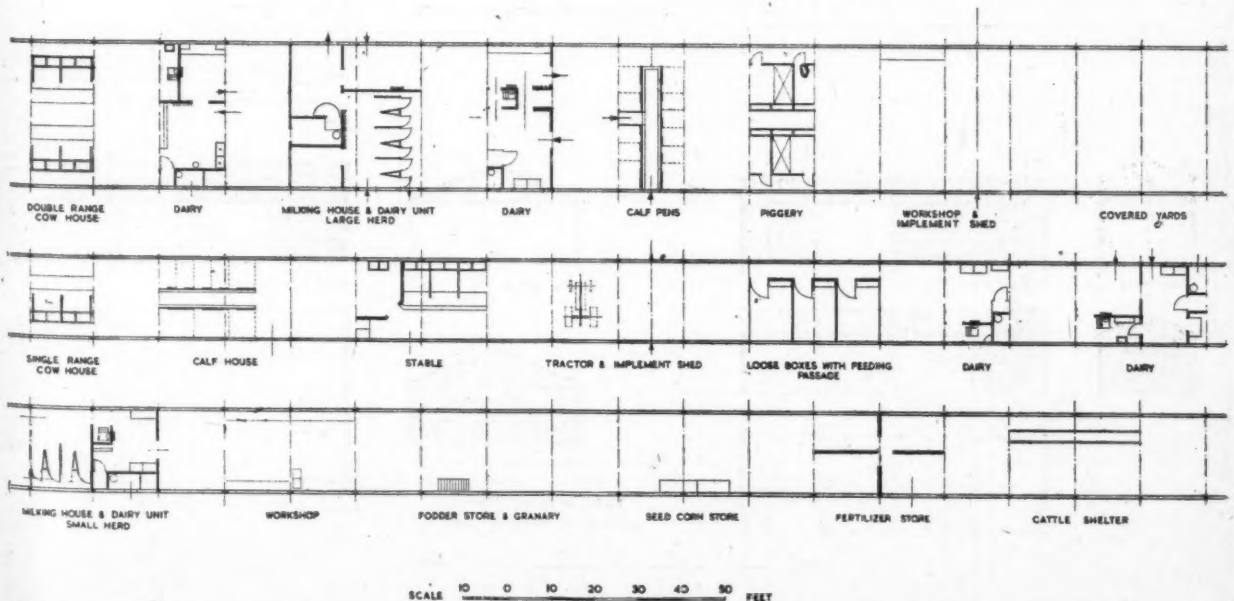
MINISTRY OF AGRICULTURE FARM BUILDINGS

In October, 1947, the Ministry of Agriculture set up a Working Party with four tasks: (i) to design two standard buildings; (ii) to investigate and arrange for supplies of materials; (iii) to propose arrangements for the manufacture of components; (iv) to propose arrangements for distribution. The recommendations of the Working Party now being put into effect are illustrated here.

ADAPTABILITY: INTER-CHANGEABILITY. — Standard dimensions must take account of the wide range of uses to which farm buildings may be put, and also of possible changes in farming techniques. A standard building must be a shell suitable for as many uses as possible, and capable of being readily adapted to a succession of uses as farming techniques and purposes change. Es-

entially, the standard dimensions of the components of the buildings relate to the distance apart of the fixing points and to the design of the contact surfaces. Provision is made in the detailed design of components for the use of new materials or new methods of using existing materials.

STRUCTURE. — The structure consists of light steel trusses, so



Diagrams showing the adaptability of the standard eighteen and thirty-three feet roof spans. Various materials can be used as infilling between the pre-cast concrete posts. The walls may also be weight-bearing of any material.

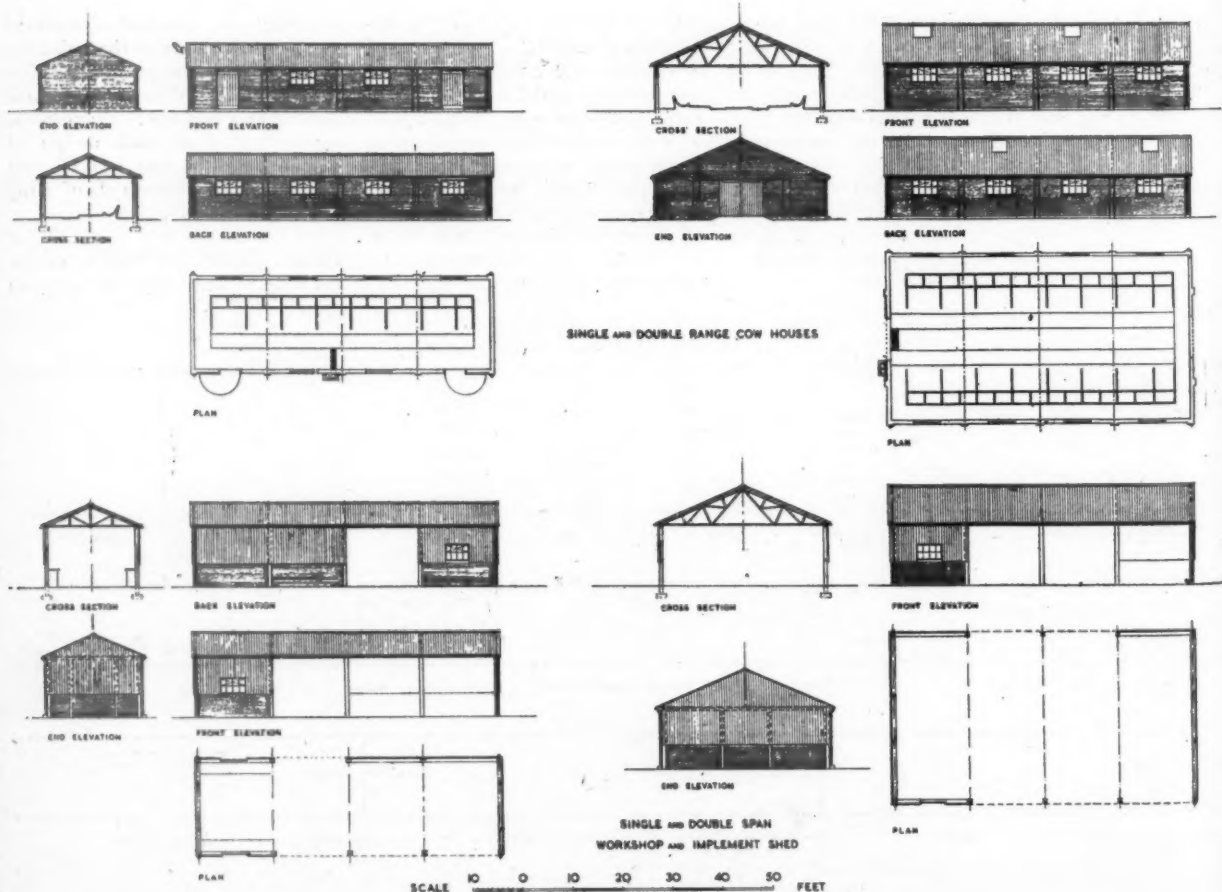
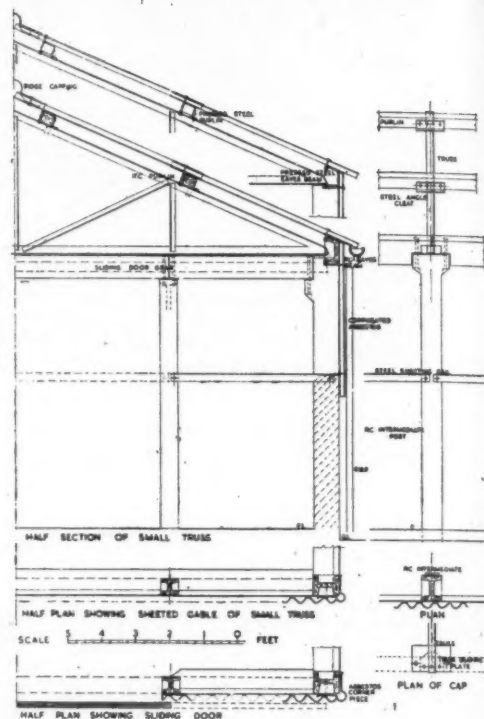
designed that two of the trusses for the smaller span can be combined with the use of an angle tie to form the truss for the larger span. Posts are of H section, pre-cast reinforced concrete in three lengths. Eaves beams and purlins may be either pre-cast concrete or pressed steel. The posts and eaves beams will not be required if weight-bearing walls are used.

RANGE.—The present scheme provides two standard spans; this number can be expanded in the light of demand and of experience in manufacture and distribution. The spans selected give 17 ft. 6 in. and 32 ft. 3 in. clear within the walls, respectively. The length of bay is 15 ft. in both cases. In the larger building, one bay will provide 483½ sq. ft. and in the smaller

262½ sq. ft. of uninterrupted floor space. The buildings may have framed or weight-bearing walls. For the former, standard reinforced concrete posts have been designed, 8 ft., 12 ft. and 16 ft. high. Infilling may be solid, of brick, concrete or other blocks; or the sides may be sheeted; or a combination of solid infilling and sheeting may be used. Weight-bearing walls may be of any height.

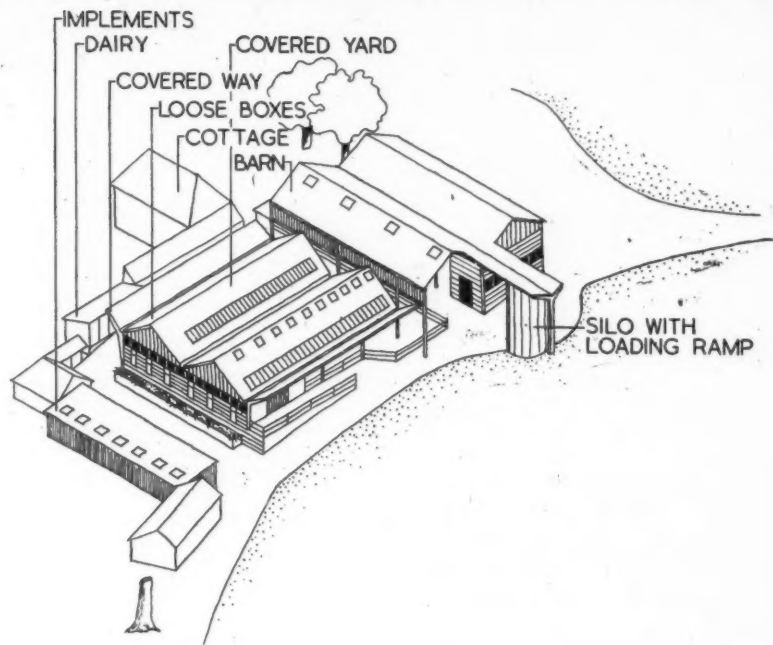
LIGHTING.—For the 33 ft. building a combination of roof and wall lighting is recommended. This may be either patent glazing or corrugated Perspex sheets in the roof and hopper type standard windows in the walls. Roof lighting should be as near the ridge as possible. Four sq. ft. of lighting in the roof is approximately equivalent to 3 sq. ft. in the walls.

On the right, sections through a typical eighteen-foot span building. The eaves beams and the purlins may be pre-cast concrete or pressed steel, both being standard. The section shows a solid plinth wall, with sheeted construction above. Below, diagrams showing typical buildings, cowhouses and implement sheds. Alternative spans and wall construction are indicated.



M A F F A R M B U I L D I N G S

Right, a bird's-eye view of the development scheme using standard 26 ft. span buildings with covered platform on either side. This original proposal has been modified to allow the use of the newly announced MAF standard components. Bottom, section through the buildings as existing and as originally proposed.



FARM SURVEY AND PLAN

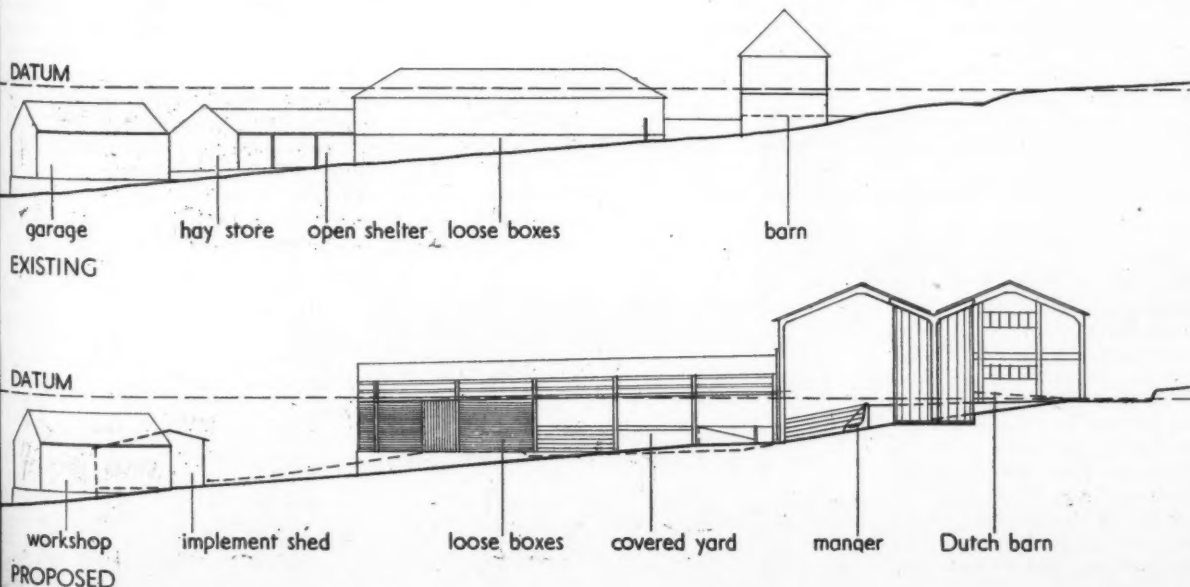
BY GERHARD ROSENBERG

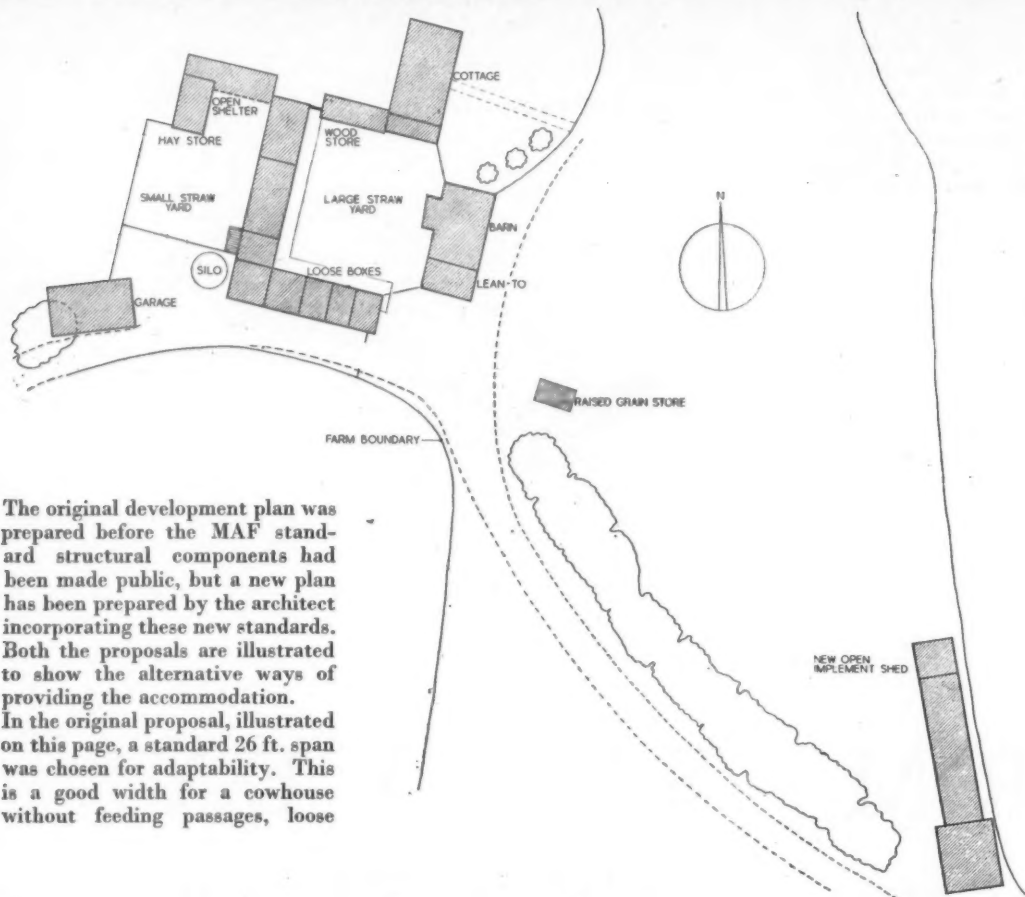
This development plan for Balcombe Farm, Sharpthorne, Sussex, well illustrates the kind of help that can be given to farmers by architects. The proposals of the plan may be compared with the existing buildings, an old barn, and a number of wooden shacks.

The site as surveyed is very hilly, and nowhere in this small farm of 75 acres was there a level area large enough to site all the buildings required.

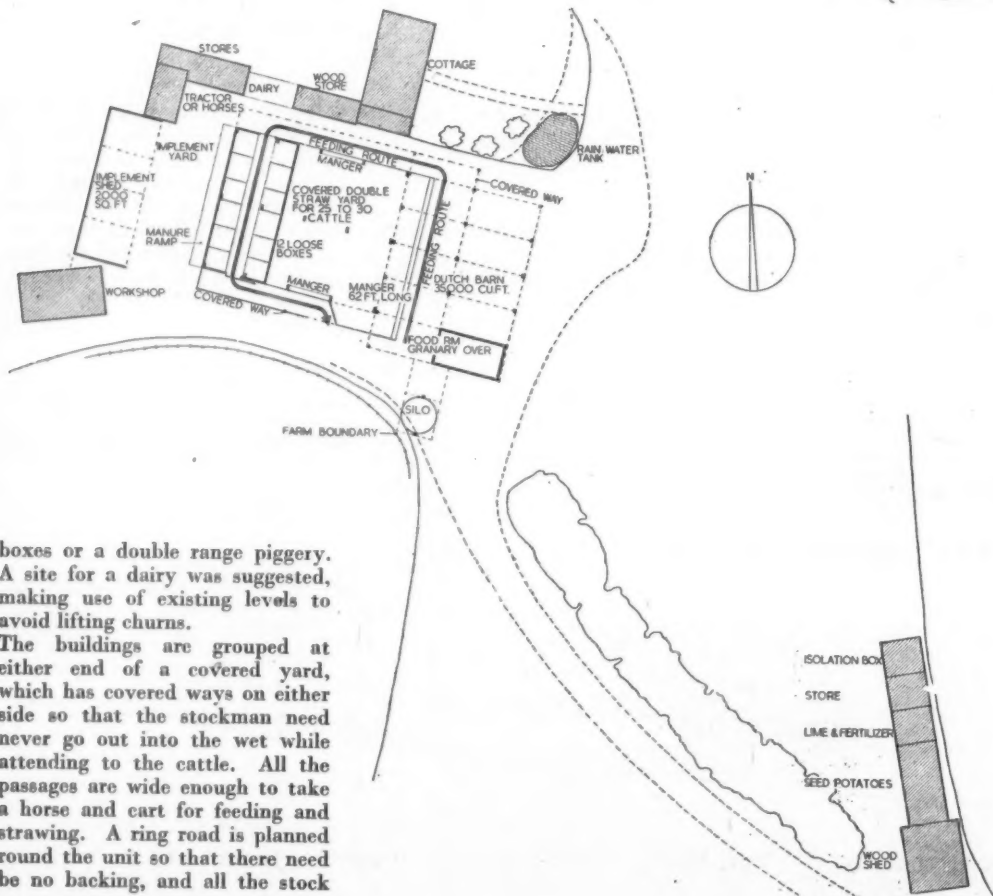
The client asked that the buildings should be widely adaptable, as farming policy had been radically

altered before and might be in the future. In fact, the only type of farming the owner does not contemplate is dairy farming. In case the farm may be sold at some time in the future, the possibility of converting the farm to dairying had to be considered.





The original development plan was prepared before the MAF standard structural components had been made public, but a new plan has been prepared by the architect incorporating these new standards. Both the proposals are illustrated to show the alternative ways of providing the accommodation. In the original proposal, illustrated on this page, a standard 26 ft. span was chosen for adaptability. This is a good width for a cowhouse without feeding passages, loose



boxes or a double range piggery. A site for a dairy was suggested, making use of existing levels to avoid lifting churns. The buildings are grouped at either end of a covered yard, which has covered ways on either side so that the stockman need never go out into the wet while attending to the cattle. All the passages are wide enough to take a horse and cart for feeding and strawing. A ring road is planned round the unit so that there need be no backing, and all the stock

SURVEY

Balcombe Farm as it is to-day, a barn and some wooden shacks form the buildings for this 75 acre farm. The site is hilly and there is no level site large enough to accommodate all the buildings.

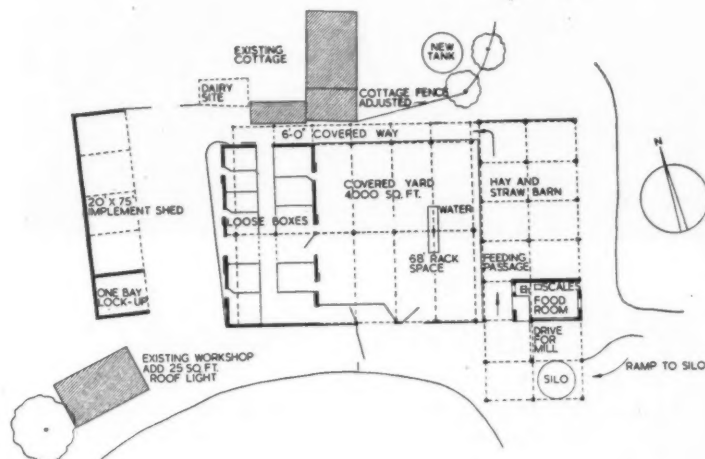
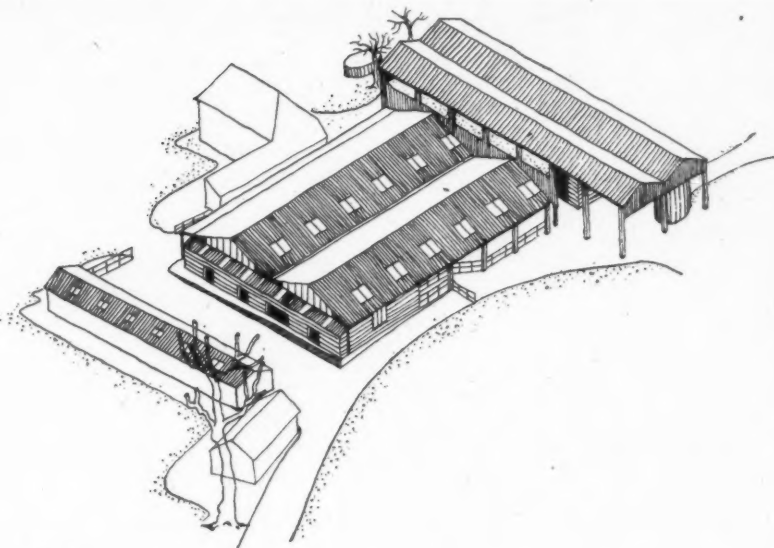
PLAN

The original development plan is a $\frac{1}{8}$ in. scale. A site has been provided for a possible future dairy. The ring road reduces unproductive movement to a minimum and allows the access of cattle and vehicles to both sides of the yard.

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The scheme revised to allow the new standard MAF components to be used. Right, a bird's-eye view. The principle of the layout remains the same, the spans of the buildings being 16 ft. and 33 ft. Centre, the revised development plan to a scale of $\frac{1}{8}$ in. to 1 ft. Bottom, a longitudinal section through the covered yard, which may be compared with the section through the existing buildings on page 217.



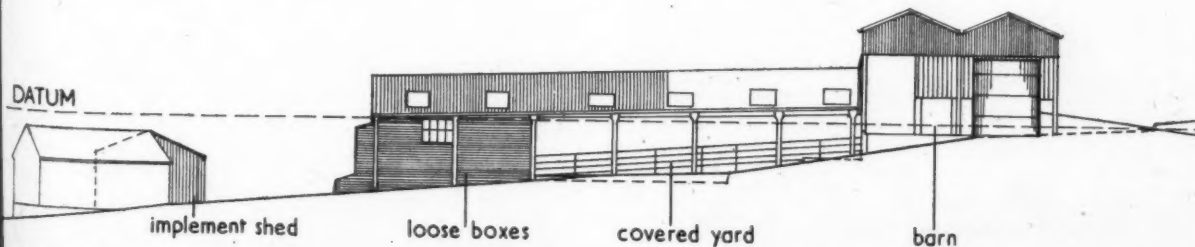
arrangement, using the 16 ft. and 33 ft. spans.

There is a piped water supply, but no electricity.

The building accommodation required on this farm was: barn for 25 acres of hay and 25 acres of corn, with threshing space, room for cavings, etc.; silo for 10 acres; rat-proof granary and mixing space; tractor house with work-bench, and room for hand tools; covered yard for up to 25 head of cattle; 12 loose boxes, which might be converted into cow stalls; implement shed for two tractors, elevator, four-wheel trailer, three-furrow plough, two mowing machines, cut-lift, side delivery rake, tedder, barrows, potato ridging plough, 10 ft. fertiliser drill, cultivator, roller, hay sweep, seed barrow, 6 ft. drill, stack covers, wheel-barrows and other stores.

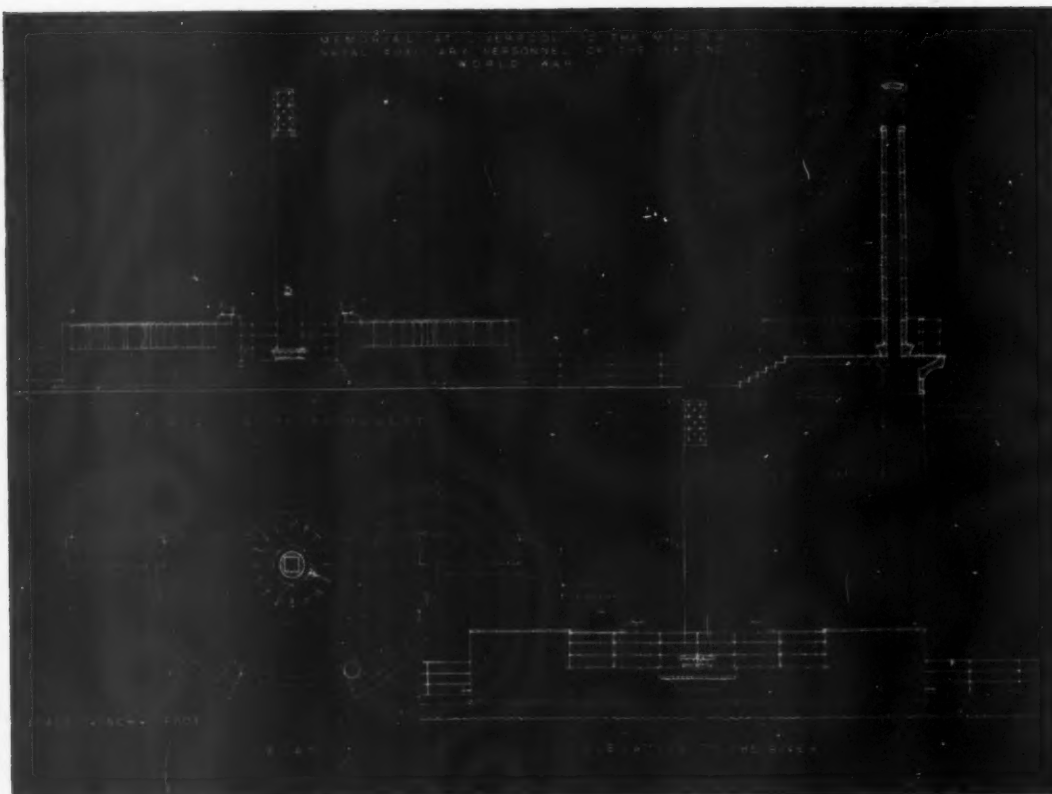
can be passed in one journey. Vehicles and cattle have access from both sides. The road slopes slightly from the point of loading to the last box to be fed. Manger space of 3 ft. 6 in. run per head is provided, most of it in one stretch. The long run of 62 ft. is adjacent to the hay barn, the latter being large enough to allow threshing under cover. The granary is close at hand above the mill. Dinging out is done by throwing

dung either into the yard or on to a platform alongside the boxes. The fire risk is substantially decreased by placing the barn in such a way that no sparks are carried to the cottage by the prevailing wind. An emergency water tank, fed by rain and piped water is suggested in the cottage garden, however. The alternative layout, making use of the new MAF standard components, is based on the same



PROPOSED

FARM SURVEY AND PLAN:
BY GERHARD ROSENBERG



Left, the winning design by S. H. Smith & Charles Blythin.

NAVAL MEMORIAL COMPETITION

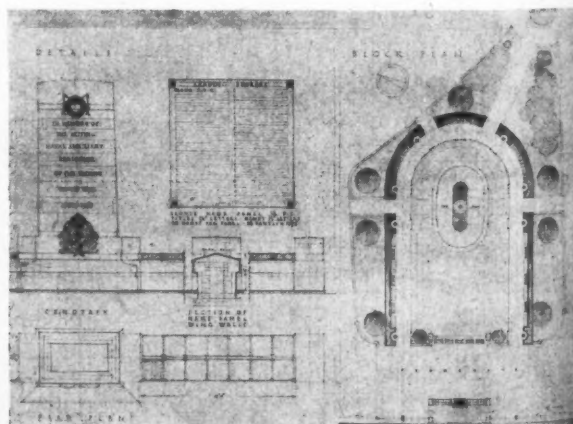
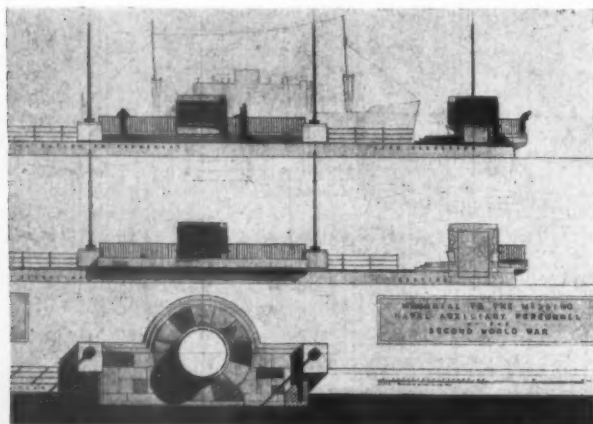
Messrs. S. H. Smith and Charles Blythin won the competition held by the Imperial War Graves Commission for a memorial at Liverpool to the missing of the Naval Auxiliary Personnel, as reported in last week's issue. Mr. C. D. Ostick's design, was awarded the second premium, and Mr. H. St. J. Harrison's design, the third.

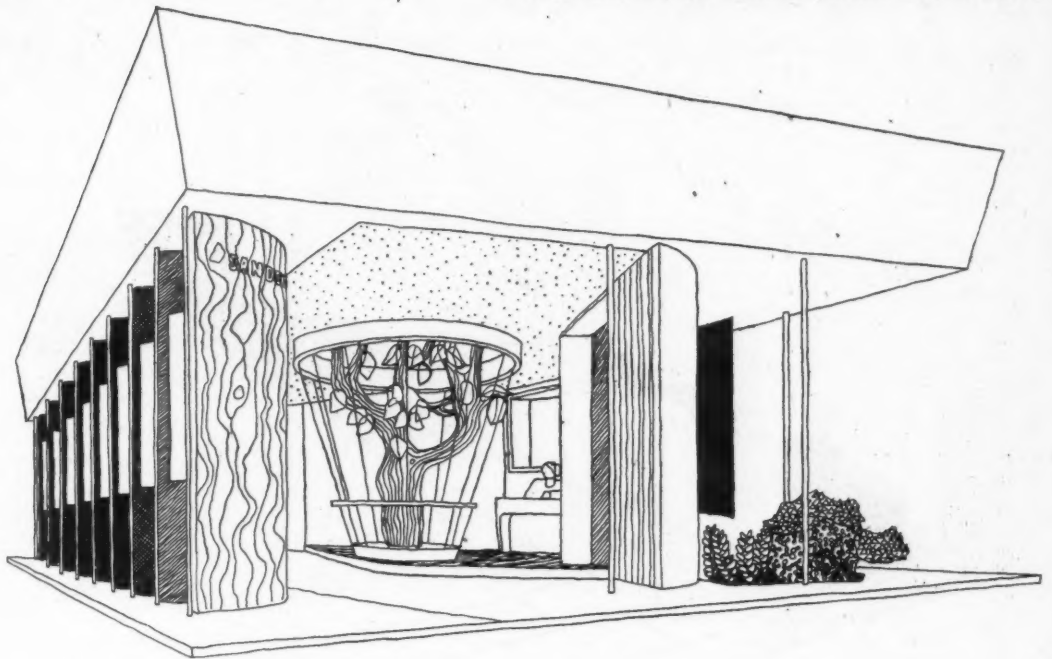
Mr. Edward Maufe, the assessor, said that as further competitions are to be held of a similar nature, he

hoped his report would prove to be of some help to future competitors. In his report, Mr. Maufe regretted that a large number of the designs had to be ruled out on purely practical grounds: the placing of name tablets too high to be read or so low as to be liable to defilement. Some designs obstructed the promenade or ignored the question of police supervision. Other designs were ruled out owing to excessive cost and unsatisfactory materials, and among the few left after these circum-

stances had been taken into account, hardly any showed the use of appropriate symbols. Mr. Maufe said of the prize winning design that it was eminently practical, though somewhat lacking in inspiration. He suggested the removal of the lenses from the top of the column, and the making of other minor alterations. He considered the anchor shaped garden plan impracticable symbolism, and recommended instead the garden layout of the design placed third.

Below, left, C. D. Ostick's design awarded second place. Right, a detail of H. St. J. Harrison's design placed third.





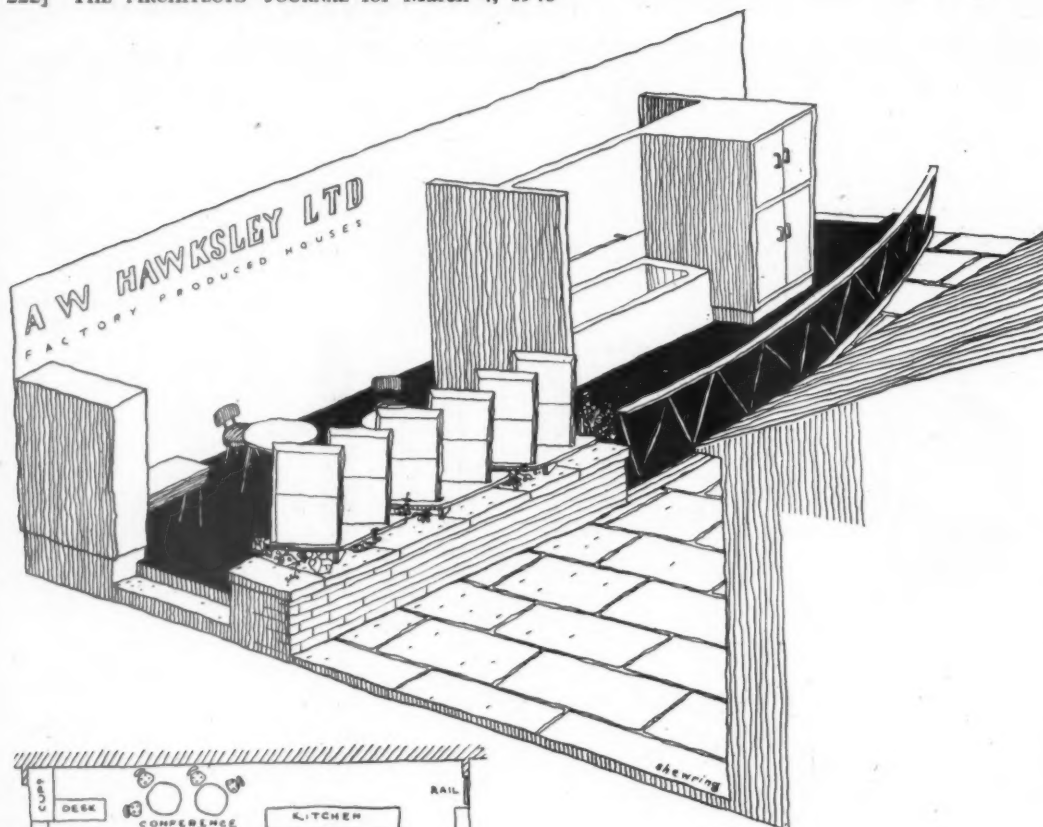
Wall paper stand designed for Arthur Sanderson and Sons by Christopher Nicholson.

The layout of the Ideal Home Exhibition at Olympia, which opened on March 2, has been under one architect, Mr. Douglas Dick, and fascias and lettering have been standardised in each hall. The wall paper stand for Sanderson and Sons is designed by Christopher Nicholson. One side of the stand consists of a screen with alcoves displaying wall paper against a continuous black flock background. A tree, in the centre of the stand, has leaves of different fabrics and wall papers backed with aluminium foil. Wells Coates has designed two stands, one for A. W. Hawks-

STANDS AT THE IDEAL HOME EXHIBITION

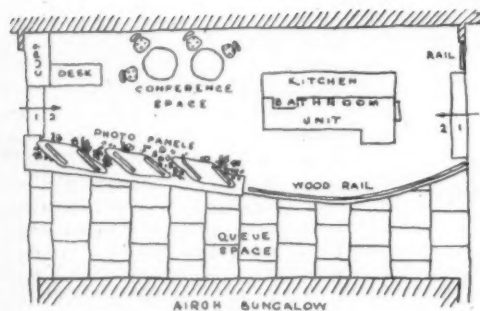


Stand to exhibit curtain accessories, designed for Messrs. Thomas French and Sons, Ltd., by Wells Coates.



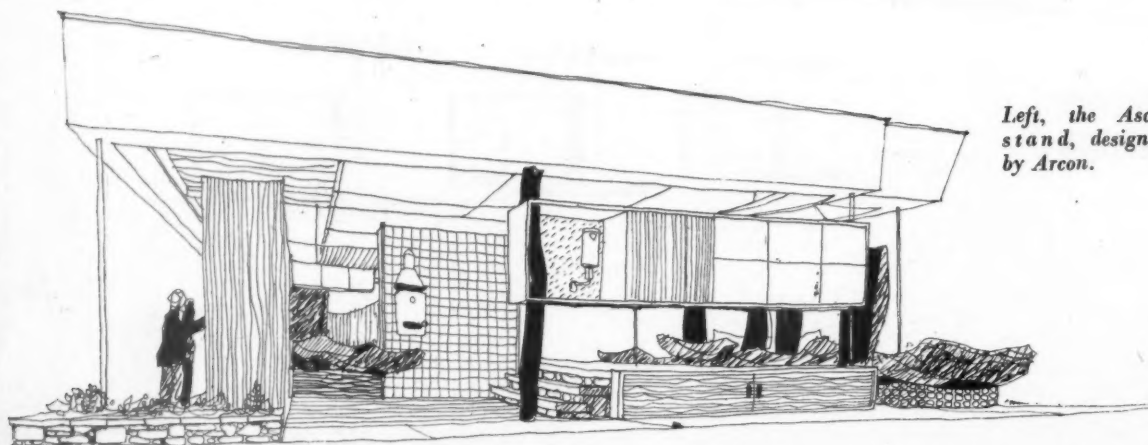
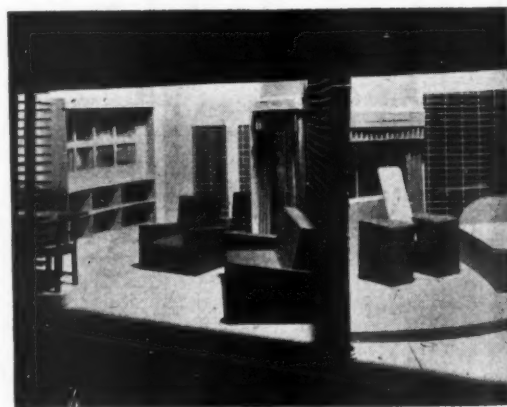
Left, perspective and plan of stand to show the bathroom-kitchen fitment of the Hawksley aluminium bungalow designed by Wells Coates.

Below, the model of a stand for Smart Brothers, Ltd., designed by Messrs. Usherwood & Worledge.



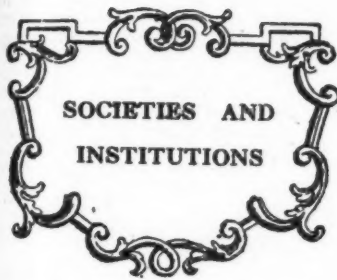
ley's kitchen-bathroom unit, the other displaying curtain fitments for French and Sons. In this stand the maximum use has been made of fitments as an integral part of the design. The Arcon design for Ascot water heaters is an intricate arrangement of screen walls made of brick, glass,

bamboo and stone to prevent confusion of the eye by seeing straight through the stand. The design by Messrs. Usherwood and Worledge for Smart Brothers is divided into five display areas by screen walls of aluminium grids, and $\frac{1}{2}$ in. by 4 in. boards slotted to form a rectangular pattern.



Left, the Ascot stand, designed by Arcon.

STANDS AT THE IDEAL HOME EXHIBITION



Speeches and lectures delivered before societies as well as reports of their activities, are dealt with under this title, which includes professional societies, trade associations and government departments. To save space they are represented by their initials—see front cover. Lectures cannot usually be reported in full, but the extracts given are in the speaker's own words.

AA

Building for Agriculture

January 28. At the AA, 34/36, Bedford Square, W.C.1. Addresses by L. Dudley Stamp, Jacqueline Tyrwhitt, Geoffrey Clark, and Gerhard Rosenberg on BUILDING FOR AGRICULTURE. The President of the AA, Mr. Howard Robertson, was in the chair.

THE AGRICULTURAL PROBLEM

L. Dudley Stamp: What is the carrying capacity of our land? Have we ever tried to work it out in terms of human beings? We have worked out the carrying capacity of the land in terms of animals, but what is the human population which our rural land will support? How can we plan villages, how can we suggest the number of houses which we should build in the country, until we know the answer to that question? Yet we have not thought about it.

We may say that we will divide the rural population into three groups. The first group consists of what I would call the primary rural population, the people who actually live and work on the land—the farmers and farm labourers. Then we have the secondary rural population, those who exist to service the farm. Thirdly, we have the adventitious rural population, those who live in the country because they like it, possibly working in the towns or possibly having retired; those, that is, who have no direct connection with the soil for purposes of sustenance.

Let us think in terms of those three groups and see how many people the land can support. If we have an average size of farm—an average covering all types of land—of 100 acres, that means that there are just over 6 farms to the square mile, which means just over 6 farmers to the square

mile. The average size of the rural family, so our demographers tell us, is 3.5, which means that there are 21 persons per square mile who are farmers and their dependents. What about the farm labourers? They are decreasing in numbers. Why? It is bad rural housing which is partly responsible for the farm labourer moving to the town. We know all about tied cottages, of course, and I shall not deal with that. Moreover, with increased mechanisation, economies in the labour force are possible, though that is offset to some extent by the increase in the labour force which is required with the more intensive use of the land. We do not really know how these two balance, and I think that there is much more work to be done in trying to find that out. It is probably true to say, however, that the farm labourer population is rather less than the farmer population. Let us double the figure at which we have arrived, however, in order to take account of the farm labourers and their dependents. That will give us a primary rural population of 40 to the square mile as being what the average land will support. Where the land is of better quality, that number is increased; where it is of poor quality, the number will decrease.

What about the secondary rural population? It has been suggested that that is rather smaller than the primary population, but let us double the figure at which we have arrived for the primary population. That will give us 80 people per square mile as the sort of standard which the land will support, without taking account of what I have called the adventitious population. Suppose we say that we will keep the countryside for the people who are concerned with producing from the land. We shall then find, if we look at our demographic statistics, that those 80 people will never have amongst them enough children to support the smallest village school which the Ministry of Education will allow; in other words, you have to encourage other people to live in the country before you get an age composition which will maintain the simple structure of rural primary education. Have we thought about these problems? I suggest that we have not.

RURAL PLANNING

Jacqueline Tyrwhitt:

Dr. Dudley Stamp said that the average farm was 100 acres, and that 100 acres supported a farmer. These farms, however, do not all support the same number of labourers; a great deal depends on what you are growing and where you are growing it. The numbers vary from one man per hundred acres for sheep farming to about fifteen men per hundred acres if you are growing fruit. That has a very great effect on the number of people who can be supported on the land in different parts of the country, and that directly affects rural and village planning. In fact, you cannot have large villages on poor land.

The drift from the land goes on for three reasons. The first and foremost reason is wages; the second is the lack of employment for women (that is not emphasized enough, but it is very important); and the third is housing and amenities.

We want to get some industry in the countryside to give employment for women, and we want to enlarge our villages, because rural de-population has happened, and we have not only de-population but lack of diversity. The only people left on the land are the people who actually till the soil, or something of that sort. In the old arable days there had to be various crafts in the villages. Do not go all "crafty" and try to get them all back in the village, because it does not make sense; let us have them in the small town, with contacts with the villages. Let us revive our small country towns, and see that there is excellent transport between them and the villages, and do not

let us muck about too much with the villages.

If we can revive the use of our village churches as real centres for their local communities, and if we can give a real push to our village pubs so that they become good local clubs, we shall have provided for our local populations locally, and the rest can be done in the neighbouring small towns. We need the small town in order to be able to provide proper services in the villages. Even the Tennessee Valley Authority confessed that they needed a small town of about 1,500 people to form a sort of hub, and if they had that they could provide electricity in the outlying villages, but they must have one place in the area which gives them a reasonable load. We want small towns, properly sited, all over the countryside.

RURAL HOUSING

Geoffrey Clark: I will tell you what, I think that the countryside wants. It definitely wants better housing. Much of the housing in the countryside is abominable, though it varies in different districts. England is full of different building materials, and Dorset is a typical example, with good stone, bad stone, brick, cob, flint, and so on. Where the building stone is good, the cottages are not bad at all, but in the areas where it is cob, they are practically hovels.

Before you can know the countryside and its problems you must survey it, and I am going to tell you something about a typical dairy district in Dorset. There are four categories of housing: houses which are fit; houses which can be made fit without much trouble; houses which can be made fit only with a great deal of trouble; and houses which cannot be made fit. A survey was made of 2,500 working-class houses. Of those, 1,115 were found to be fit, and 615 could be made fit economically. That means that 75 per cent. of the existing houses are or can be brought up to date. That is a high proportion, but this is a good brick and stone district. The remaining 25 per cent. are divided equally between the houses which can be made habitable at considerable expense, perhaps for the week-ender or for people willing to spend money on buildings which are old and interesting, and the houses which must be demolished.

The next necessity is water supply. The particular council about which I have been speaking had supplied every house with water before the war, and that makes the district livable-in. They are now in process of putting in a sewerage scheme in all the bigger villages; it is not economic to do so in the smaller ones; the cost is out of all proportion, and it is not really necessary, because there is plenty of space available.

The council are taking the place of the landowner. That is a very important point. The landowner who loved his estate constructed his buildings in a certain spirit, particularly before the industrial period. I tell my council that they have taken on that responsibility, and that legislation in putting on them the duties that the landowner used to carry out, and that it is up to them to carry them out in that spirit. I think that they are trying to do so, and with the modern approach of the Ministry of Health, I think that we are going to have simple village additions rather than council estates.

The worst of council houses in the past is that we have had one type multiplied by 10 or 20, and that is fatal. Though some of these houses are very well designed, the fatal thing about them is that they have all been colour-washed in the same way, and sometimes they can be picked out from miles away. The village is a mixture, helped out very much by trees, and you must mix your different types and play about with these on the site, changing the colour you use and using the more important colour on the more important spot, so that you have

a pattern which is broken, but which is logical and fits in. I think that that is succeeding, and at any rate it does not look so blatantly horrid as before.

FARM BUILDINGS

Gerhard Rosenberg:

There is need to assure the flexibility of which Dr. Dudley Stamp has spoken. The ploughing up which has taken place has given the possibility of flexibility, and that means that farm buildings have to be flexible, and any development plan for a farm has to be flexible. Such a plan will not cost the farmer much; it will take an architect only a week or so to prepare, and every time the farmer does some work on his farm buildings, and perhaps spends £500—and about 95 per cent. of all licences for farm buildings are for an expenditure of less than £1,000—it will lead towards a good new flexible farm. We can hope, therefore, for a mixture of planning and architectural design in increasing measure. We can hope for help in this direction from the building officers of the National Agricultural Advisory Service, who have great practical experience and will soon have more. I venture to say, however, that the architect is still not entirely superfluous in the field of agricultural planning, because he has a planning mind, that kind of tidy mind which makes a scheme out of an idea. I do not think that a good agricultural advisory building officer would dispute that, and so we may hope to benefit by this triangle of farmer, advisory officer and architect-planner.

FLEXIBLE PLANNING

There is one argument which the architect can use to the farmer to put him on the right road, and that is the need to maintain the land in good heart, to maintain soil fertility. Most farmers will agree that a certain head of livestock is necessary to maintain the land in good heart, and when you have got your farmer to admit that he will have gone a long way towards giving you the information you want about square feet and cubic feet of granary and so on. You can then work out an equation, equating one cow to seven pigs or two hundred chickens from the point of view of soil fertility. If you want a very flexible plan, start from the point of view of soil fertility and head of livestock, and then you will get an idea of what buildings will be useful to the farmer, and which will still be useful if the farm is sold to somebody else with different ideas.

Are there other rules of thumb for a development plan? There is the idea of the ring road, so arranged that all the work can be done in one drive round with horse and cart or tractor and trailer, without having to back or turn. It need not be circular, but it must provide the possibility of driving straight round and coming back to the starting point without backing or turning or getting the vehicle into awkward positions.

RELATING THE COMPONENTS

Another idea is to separate the clean parts and the dirty parts. The incoming traffic—lorries collecting milk and delivering feeding-stuffs and collecting crops—and the engineering department—the workshop and the tractor shed—are all reasonably clean, but everything to do with animals in general is usually rather dirty. Keep those two apart, and do the same thing inside the cow-house: keep the passages used for feeding and milk apart from the manure and the cow alleyways. In that way you will obviate a great deal of hard work, and hard work means hard cash. If you can save an hour's work a day, that is equivalent, on a 5 per cent. basis, to an investment of £600 or more.

Then you have to consider sunlight and aspect. Everybody knows about the value of the sun, especially for young animals; but it is the morning sun and the winter sun that the animals most need, and so you want to have a south-east aspect for them. On the other hand, implements do not want the sun, because it may spoil their paintwork and may affect rubber, so that there the aspect should be north, north-east or east, keeping them away from the sun and from rain from the south-west.

FIRE RISK AND VENTILATION

You must pay attention to the risk of fire. If a fire breaks out in a barn, the hot air will carry blazing bundles of straw and sheaves of hay high up in the air with the prevailing wind. You should keep animals and cottages out of the path of the prevailing wind from the barns. A good supply of water should be available near barns; if there is a pond, that is a useful neighbourhood for a barn.

Then there is the question of ventilation. Useful work has been done by the Hannah Dairy Research Institute on the ventilation of big buildings. In Scotland they have buildings 26 feet wide, and they tried ridge ventilation and found that open adjustable ridge ventilation works well without the need for inlet ventilation. It acts like a pump; at times it takes cold air in, and at other times it evacuates air. That means that you can put two or more of these buildings side by side without the need of outside walls, and that gives you a chance to lay out the buildings in a hangar-like way. That, combined with the idea of south-east light, makes me think that it would be a good thing to develop a south-east light truss, very much like a factory roof, with large covered areas where people can work in their shirt-sleeves with good ventilation and good daylight. That might be of particular value for small farms.

TIMING

We now come to the question of timing. When you make a development scheme for a farm, you have to work each step in so that the work of the farm is never interrupted while building is going on. Every time something is done, and the farmer spends, say, £500, he should notice that things are looking up. Incidentally, I may mention that it costs £5 to rick and thatch twenty tons of hay. If you capitalize that, you find that you can afford to build a barn to cover about thirty-five tons of hay.

COST

Cost is a very ticklish question to discuss with any farmer. He always says, "It must be as cheap as possible." I have asked an economist to help me with this, and he has based his work on the milk production cost figures published by the department of agriculture of Bristol University. The net result is that if you have a very low average yield, say 500 gallons per cow per annum (which is well below the national average), you cannot afford anything at all in the way of a cow-house, but as soon as you reach a figure of about 600 gallons you can build anything that is reasonably required, and it is not worth quibbling over £100 or so, because it will pay to spend money to get a good building. Where the yield is as high as 800 gallons, the very best can be afforded. That is for accredited milk. In the case of TT milk, which brings in more money, it is found that this is worth £90 per cow extra. If a farmer changes from accredited to TT milk, therefore, he can afford to invest that sum in buildings. If it is impossible for him to get a TT licence on account of the condition of his buildings, it will pay him to spend up to £90 per cow to put the buildings right, and it will not cost anything like that amount of money to do it. These figures of yield are of great importance from the national point of view. Our national

average is 545 gallons per cow per annum, while in Holland it is 770 gallons. That makes you think. Professor Petersen was over here recently from America. He is a great expert on milk production, and he said that our poor buildings are our biggest obstacle to production. Dr. Dudley Stamp has told us that our production has almost doubled during the war with no increase in labour or buildings, so perhaps Professor Petersen may be exaggerating.

STANDARDIZATION AND PREFABRICATION

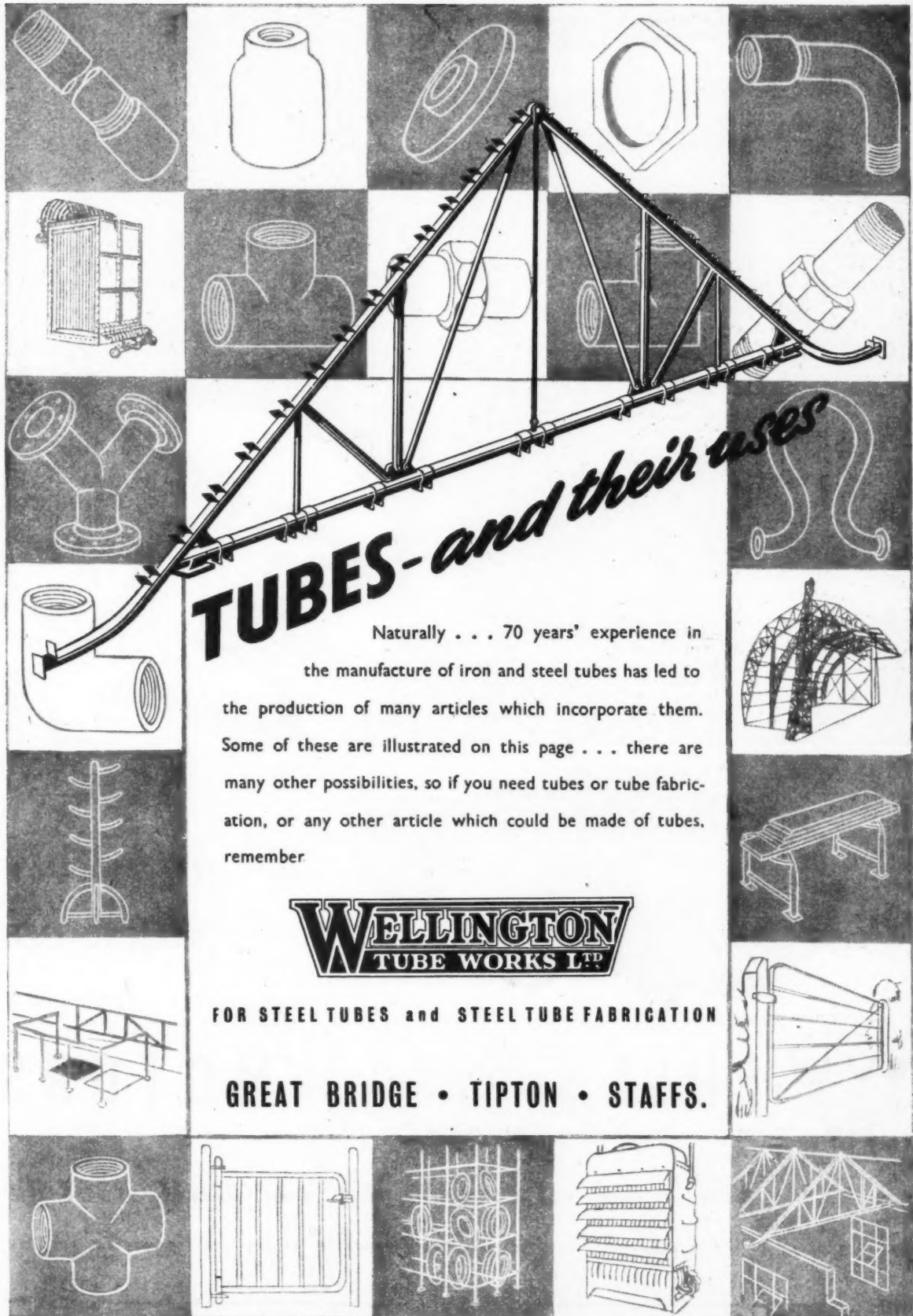
A great deal of work has been done on the possibility of standardization of sizes and of prefabrication, with the supply of ready-made building material to the site. That means that trusses and sheeting are supplied, and local building technique is used for panel infilling. This has been very successful. Three or four unit sizes have been worked out, and it will probably be possible to reduce them to two, and still solve most of the practical problems of our farm reconstruction programme.

I think that the Farm Buildings Report (Post-War Building Studies No. 17) is already a little out of date. Apart from the wide cow-house and the 16-18 ft. span, which seem to be obvious choices, I feel that a very small span such as 10 ft. is needed for market gardeners, for small implements, for loose-boxes and so on. It would be a very useful size to add. In Scotland the 26 ft. span is very much better, so that altogether we might have four sizes, but I think that we could manage with two. If you want to do these development plans, it is just as well to work on the basis of these standard dimensions. For the distance between trusses, 16 ft. 6 in. is about the widest that can reasonably be done in steel, and 15 ft. 6 in. to 16 ft. is about the biggest in concrete, so that in the end the span will probably be between 15 and 16 ft.

NEW MATERIALS


With regard to the materials available, I have a collection of manufacturers' and other photographs which I think is encouraging. These new buildings are very different from our old ideas of farm buildings derived from excursions into the country in our childhood. The new materials are asbestos cement, reinforced concrete, mass concrete and the combination of those with local materials; we may have concrete trusses with pebble or flint or local stone infilling, and it looks very well from the appearance point of view. I am not frightened that architects may have to abandon farm buildings as being 'wholly utilitarian, without any aspirations towards architectural character. The manufacturers seemed to think so for a long time. I am amazed that the British Iron and Steel Federation had no photographs at all to give me, whereas the Cement and Concrete Federation offered me 65.

Among new materials we have aluminium and Perspex. Aluminium has the lovely quality of being maintenance-free and of reflecting the sun's heat. It is very expensive, but in view of what I said before about the possibility of investing a large sum in some of these farm buildings, I think that for such small buildings as dairies and milking sheds aluminium would be very suitable. The prefabricated sheet made in asbestos cement, a corrugated sheet with little holes to allow the building to breathe, is very well suited for use with aluminium. That type of thing cannot be used with steel, because of the danger of rust, but it can be done with aluminium. There is also corrugated Perspex sheeting, which has come to stay, but the cost of which will probably go up. Altogether, there is a lot of fun for an architect in using these new materials in what is for him a new field, and so getting an increasing number of photographs available for exhibitions and for the journals.



TUBES - and their uses

Naturally . . . 70 years' experience in
the manufacture of iron and steel tubes has led to
the production of many articles which incorporate them.
Some of these are illustrated on this page . . . there are
many other possibilities, so if you need tubes or tube fabric-
ation, or any other article which could be made of tubes,
remember



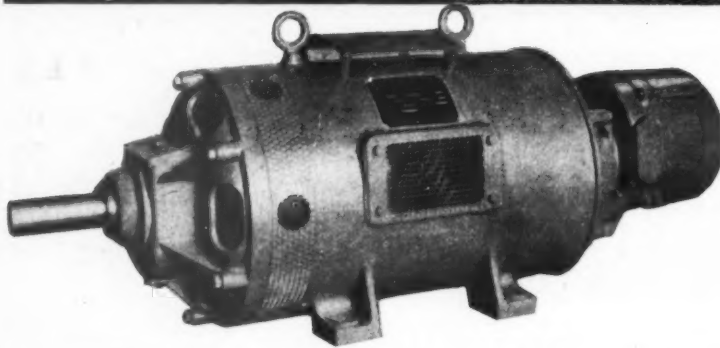
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INFORMATION CENTRE · INFORMATION SHEETS
QUESTIONS AND ANSWERS · CURRENT TECHNIQUE
THE INDUSTRY · PRICES · TECHNICAL ARTICLES

TECHNICAL SECTION

A digest of current information prepared by independent specialists; printed on one side of the paper only, to allow readers to cut out the items for filing and paste them up in classified order. Headings below.

INFORMATION CENTRE

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE. 8 SURVEYING, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Complete Structures. 21 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION, ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES, EQUIPMENT. Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

2.29 planning: general

PLANNING ACT, 1947

Town and Country Planning Law. J. Kekwick (Stevens & Sons, Ltd. 1947. 45s.)

Comprehensive reference book on Town and Country Planning Act, 1947, providing general explanatory notes to each section followed by detailed comments on difficult passages. Five appendices dealing with certain earlier planning Acts. Fully indexed.

In a clearly written and concise introduction to the book the author discusses the fundamentally new approach to town and country planning under the new Act against the background of earlier planning legislation, and draws attention to certain of its important and outstanding features. The text of the Act is then set out verbatim interspersed with explanatory notes and detailed comments.

The five appendices contain verbatim reprints of the following Acts:—

Acquisition of Land (Assessment of Compensation) Act, 1919; Acquisition of Land (Authorisation Procedure) Act, 1946; Requisitioned Land and War Works Act, 1945; Parts II, VIII and X; New Towns Act, 1946; and Statutory Orders (Special Procedure) Act, 1945.

17.21 materials: miscellaneous

STONE

Oxford Stone. W. J. Arkell. (Faber & Faber. 1947. 25s.)

Excellent description of stones in Oxford buildings, their origin and weathering qualities. Much information about type of stone in many university and college buildings. Maps of quarries, photographs of buildings. Stone slates. Methods of repair.

This book contains a great deal of information about which stones have been used in various Oxford buildings with descriptions and often photographs to illustrate how they have weathered. The various types of stone are described in some detail, often with maps of the quarries and descriptions of methods of quarrying and working. This in itself makes the book invaluable to anyone interested in buildings in Oxford, but the author, who was a senior research fellow of New College for many years, is not only qualified as a scientist to deal with the technical aspects of the subject, but has in addition a very keen and critical approach to the aesthetic side and has many interesting comments to make which although applied here only to Oxford buildings have, in fact, a much wider significance.

The book should be carefully studied by all those interested in the care and maintenance of stone buildings.

19.32 construction: details

LIGHTWEIGHT CONCRETE SLABS

Report on Investigations in Germany on Slag Cements and Lightweight Concrete. BIOS Final Report No. 1131, Item Nos. 22 and 31. (HMSO. 5s.)

War-time development of the production and use of lightweight aggregates.

The increased demand for lightweight concrete in Germany during the war could not be met by the supply of foamed slag and pumice. A type of concrete based on a mixture of granulated and air-cooled slag aggregate was developed as a substitute.

The methods of production of aggregates and cements described in the report are of no particular interest to architects, but some of the practical applications are worth studying. The most important development in the use of lightweight aggregates is the Schäfer system. The basic element of this system is a cored slab in lightweight concrete with a thin finishing layer of high-grade concrete top and bottom, manufactured in lengths of 300 to 600 ft. and cut to the required lengths. The reinforcement consists of twin-twisted high tensile wires of 1/10 in. diameter, pretensioned to 200,000



Lightweight concrete slabs manufactured in long lengths and cut to size. See 19.32.

to 230,000 lb./sq. in. These slabs are made with a special precision plant and may be used in walls, floors and roofs. The report contains the description of a Schäfer factory and of several other prestressed precast concrete products.

20.59 construction: complete structures

SHELL CONCRETE

Shell Concrete Construction. H. G. Cousins. (Lecture at the Reinforced Concrete Association, Jan. 14, 1948.)

Description of domes and barrel vaults, design considerations, tests, expansion joints, waterproofing, thermal insulation, lighting, ventilation, materials, formwork, prestressing, costs, advantages.

23.54 heating and ventilation

HEAT PUMP

The Norwich Heat Pump. J. A. Sumner. (The National Builder, Jan., 1948. pp. 116-118.)

Brief description of heat pump with illustrations and table of costs.

This article gives a very brief description of the principles upon which heat pumps work; describes in general terms the Norwich installation and gives figures of cost comparisons between the Norwich buildings heated by normal methods and by the heat pump. These figures show the heat pump is providing an appreciably cheaper service, particularly when thermal storage is provided so that the electrical energy can be taken at "off-peak" periods.

This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

QUESTIONS AND ANSWERS

2933 FACTORY: NATURAL LIGHTING

Q We have designed a single-storey factory building with a pitched roof, and wish to instal roof deadlights to give a diffused average natural daylight intensity of 10 ft.-candles in the working plane, 3 ft. above floor level. Can you suggest a simple formula for calculating the number and spacing of deadlights according to their size?

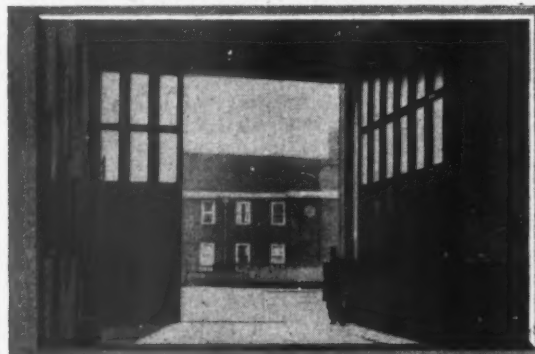
The roof is constructed with a 20° pitch, is 15 ft. 6 in. to underside of valley, and 23 ft. to underside of ridge with a clear span of 42 ft., the ridge beam spanning 106 ft. across the building.

A A daylight intensity of 10 ft.-candles would usually be taken to represent a 2 per cent. daylight factor, on the assumption that a common outdoor illumination is 500 ft.-candles.

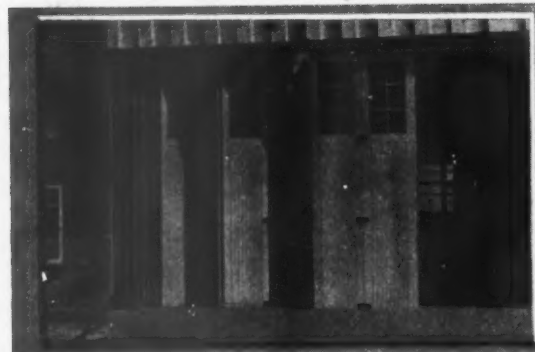
There is no simple general formula for size and spacing of roof lights. In this particular case a trial with daylight factor protractors indicates that a total area of glazing equal to about 7 per cent. of the floor area is required, and that a suitable situation to give uniform distribution would be in a single line on either side of the ridge a little more than half-way down to the valley. The deadlights should be spaced uniformly along the line, except in about the last 15 ft. at either end of the main span, where the number of lights should be about doubled, unless there are windows to compensate for the reduction in daylight factors at the edges of the building.



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GEAR FOR ANY DOOR, PARTITION OR WINDOW THAT SLIDES

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The only ultimate guarantee of lower prices, says Professor Ian Bowen in the following article, is a large increased world production, and there are at present no signs that this has yet been sufficiently accomplished.

A New Index Number for Building Materials' PRICES

No. 8

[by Ian Bowen]

THE INDEX NUMBER AT FEBRUARY, 1948.

The index number for the middle of the first quarter of 1948 is 209.2. This is the average rise in price since August, 1939, of the 44 building materials covered by the Index, the items being weighted according to their peacetime usage.

The following table shows how the Index has moved since the end of the war:

	Index (Aug. 1939 = 100)	Number of points increase on previous quarter
1945 Quarter 3 ..	160.5	—
" 4 ..	164.2	+3.7
1946 " 1 ..	167.6	+3.4
" 2 ..	170.2	+2.5
" 3 ..	175.8	+5.6
1947 " 4 ..	180.7	+4.9
" 1 ..	183.5	+2.8
" 2 ..	197.2	+13.7
" 3 ..	200.7	+3.5
1948 " 4 ..	206.0	+5.3
" 1 ..	209.2	+3.2

The Index has risen by 3.2 points since the middle of the fourth quarter of 1947, and 25.7 points since the first quarter of that year. Fifteen of the price quotations used in the index have risen since November. The rises with the biggest effect on the Index were sharp washed sand, bricks, cement, roofing felt and asbestos cement roofing sheets, in that order. The actual percentage increases over the quarter for these items were as follows (the increases since 1945 for the same commodities are shown in the first column).

February, 1948 Percentage increase on		
	August, 1945	November, 1947
Sand	19.0	5.6
Bricks	24.4	5.0
Cement	6.3	1.7
Roofing felt	24.4	6.8
Asbestos cement roofing sheets	2.4	5.0

Other commodities which have risen in price since November, 1947, are plaster-board, steel, manhole covers, baths, tubes and tubular bends, and asbestos cement pipe. There has been a slight fall in the price of lead piping.

ANALYSIS OF PRICE MOVEMENTS BY GROUPS OF MATERIALS

As in previous articles, the 44 materials have been divided into four groups according to their general nature and method of production. The Index number has been calculated for each of these groups, first taking August, 1939, as the base, and secondly August, 1945. The following table shows these Index numbers for the last three quarters of 1947 and the first quarter of 1948, on the base 1939=100.

	1947			1948
	Quarter II	Quarter III	Quarter IV	Quarter I
1. Imported products	336.9	336.9	337.2	338.8
2. Metal products	205.9	209.2	223.3	225.6
3. Quarried products	191.5	201.4	202.0	205.9
4. Primary material	149.3	152.1	156.5	160.0
Av. of all materials	197.2	200.7	206.0	209.2

It will be seen that imported products have remained fairly steady for a year, only rising from 336.9 to 338.8. They did however show a spectacular rise between Quarter I and Quarter II, 1947.

Metal products have risen considerably since the second quarter of last year, but over the last quarter they have only gone up by 2.3 points.

Quarried products have gone up at a greater rate than this, and the biggest rise of all is shown for primary materials. This last group includes bricks and cement, which have shown, as already mentioned, a significant rise over the last quarter.

MOVEMENT IN PRICES SINCE 1945

A comparison of present day prices with their level at the end of the war is shown in the following table.

	1947			1948
	Quarter 2	Quarter 3	Quarter 4	Quarter 1
1. Imported products	175.5	175.5	175.6	176.7
2. Metal products	127.3	129.3	144.5	145.9
3. Quarried products	125.1	131.5	131.9	134.0
4. Primary materials	100.8	102.6	105.4	107.9
Av. of all materials	121.5	123.6	128.3	130.4

The table shows that since the end of the war, building materials have, on an average, risen by 30 per cent. By far the biggest rise has been for imported products despite their relative stability over the last twelve months. Metal products still come second with a rise of 46 per cent; quarried products are third with a rise of 34 per cent., and

primary materials have so far risen by the relatively modest amount of just under 8 per cent.

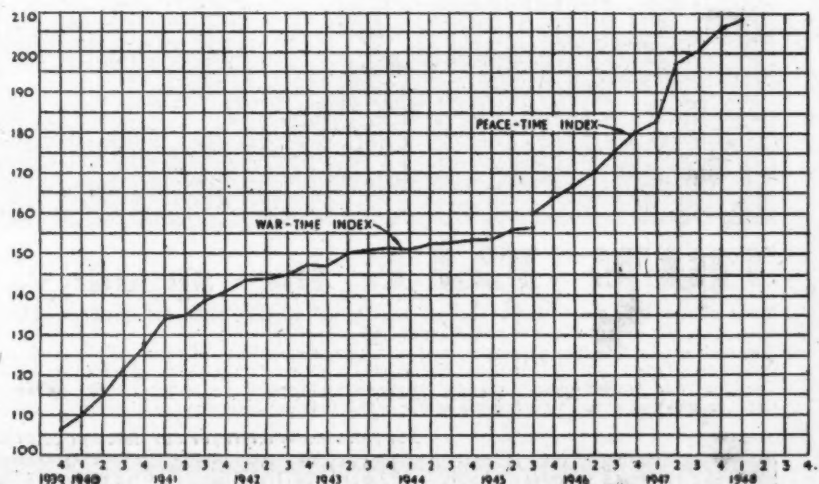
In view of the rise in coal prices, and the cost of transport, it is hardly to be expected that primary materials will not feel a considerable strain in the current year. Quarried products are also likely to be influenced by the movements in transport charges and by any rises in wage costs that are permitted. Metal products are of course mainly influenced by the cost of raw materials, and by the price policy followed by the iron and steel industry. Imported products may have reached their peak in price, if there is any general recession in the American price level with its important repercussions on the world prices of timber and of the ingredients for paint.

PROSPECTS FOR 1948

Each of the groups of commodities therefore is likely to be influenced by rather different considerations during the current year. In the absence of a vigorous Government policy of control of prices and counter-inflationary measures it might have been expected that the 4th group of commodities (primary materials) would have risen considerably during the present year. They had, as it were, the most leeway to make up, and the rising tendency of fuel and wages costs were pointers to fairly considerable increases in the prices of these commodities. Nor is the cut in the building programme likely to assist. Several of the industries concerned can gain the advantages of lower costs when they are running at near to full capacity, and a cut in output is almost bound to affect them adversely unless it is possible to concentrate the cut entirely on the least efficient units of production. This will no doubt be the Government's intention, but it will not be an easy policy to implement, since the siting of the cement and brickworks of the country (in relation to the work to be done) is one of the main determinants as to which units are left in full production.

Similar considerations apply to quarried products. It seems however far from certain that price control has been as rigorously applied to these products as it has been to the primary materials. It might be worth enquiring further whether the freezing of prices for these materials could not be accomplished successfully this year without any loss in output.

The prices of metal products are liable to be driven slightly upwards in view of the



Graph showing price index from 1939 to the present.

great strain being placed this year on the iron and steel and other metal industries. Any permanent freezing of the prices in this sector does not seem likely to be accomplished for another twelve months, and the situation can only be alleviated when more capacity comes into production and the general iron and steel supply position is eased by this and other means.

Imported products are hardly likely to come down in price in the near future. Even if there is a recession of prices overseas, it is difficult to visualise Britain obtaining timber much cheaper as long as the strain on the exchanges persists. We must not anticipate a devaluation of the £, but at the same time, a substantial movement of the terms of trade in Britain's favour would be too much to hope for in a year when the balance of payments is still extremely unfavourable. From a building materials point of view, therefore, the best that could be hoped is that imported products would not show a continued upward movement over the next three or four quarters. The world demand for timber after all is still by no means satisfied. The only ultimate guarantee of lower prices is a large increased world production, and there are at present no signs that this has yet been sufficiently accomplished.

BUILDING MATERIALS AND THE NEW WAGE AND PRICE POLICY

The announcement by Sir Stafford Cripps on February 12 that prices not already controlled were to be fixed at their end of January level may have important effects on the general level of building materials' prices. Some commodities already have their prices fixed by Statutory Rules and Orders; these are bricks and sanitary fireclay.

The method of fixing the prices of these items is not likely to be altered. It is

worth noting that both of them are "primary materials" belonging to the group of materials that has risen least since 1945. Producers of some other materials (for instance, cement, plaster and glass), for which the prices are controlled by voluntary agreement, change their quotations only after application for official approval.

Under the new policy, it is apparently intended that rising labour costs will no longer be allowed to substantiate a case for increased prices. The Government accountants who work out the details of control will also, presumably, be instructed not to hesitate to allow profits to be reduced, so that the margins established either traditionally or as a recent *modus vivendi* may come to be threatened. As a long-term policy this might have considerable dangers. The principle of reducing profits might threaten the possibility of lucrative investment or of progressive efficiency in production. But as a short-term policy, on an inflationary situation, the direct attack on the upward trend of prices and profits may be much more practical than business men will commonly admit.

Most building materials are either produced or sold under conditions of "imperfect competition," containing a considerable element of monopoly. A price fixed deliberately and of "malice aforethought" below the level that would prevail under "free" (i.e., uncontrolled) market conditions may in these circumstances result in increased rather than decreased production. The theoretical grounds for this possibility have long been established; the main point is that under monopoly (or partial monopoly) output is restricted to the level where returns are maximized—the price is an "administered" or controlled one in any event, even in industries where the "voluntary agreement" exists. When the price is lowered by order

of the Government, circumstances may well prevail whereunder a higher output yields a maximum return.

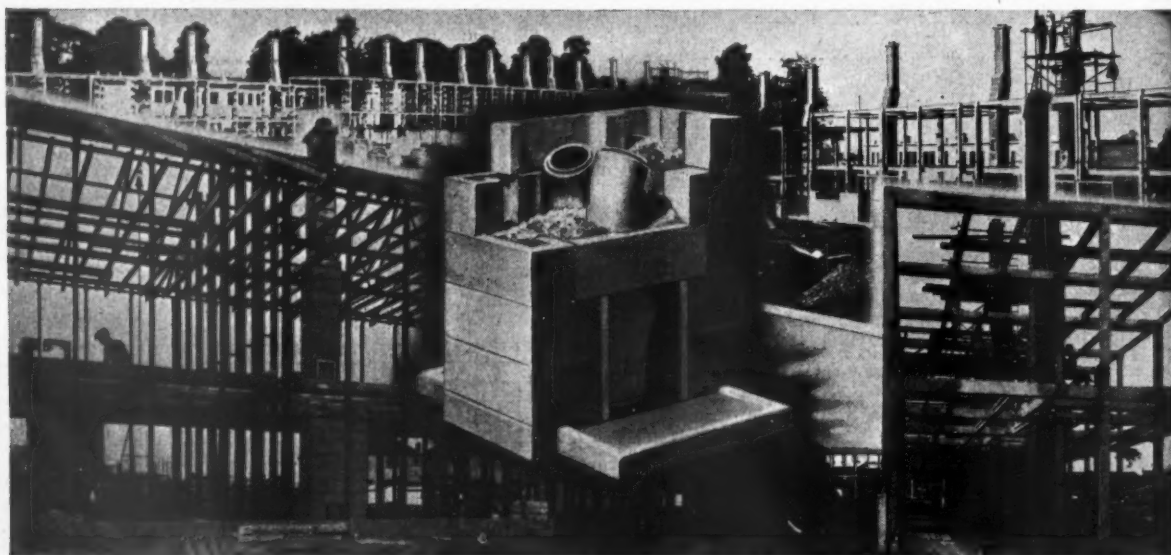
This possibility was quite well exploited by the OPA (Office of Price Administration) during the more successful years of its operation in certain industries in the United States. As already emphasized, it is a short-term possibility. But if the old and erroneous belief that to get increased output prices must *always* be allowed to rise can be refuted in practice, a much more successful operation of price control in the future may be achieved. The new policy may therefore be associated not with further difficulties of building materials supply, but with an actual improvement.

Announcements

Messrs. Gent & Company, Ltd., manufacturing electrical engineers, have issued new publications concerning their indicators, watchman's tell-tale clock, bells and buzzers, luminous call system and staff locator system. Copies can be obtained from the firm at Faraday Works, Leicester.

Obituary

We regret to announce the death of Mr. Norman D. Dick, F.R.I.B.A., who for many years was a prominent architect in Glasgow. He was a past president of the Glasgow Institute of Architects and a former governor of the Glasgow School of Art. He went to Glasgow about 30 years ago, and was in partnership with the late Sir John Burnet in the firm of John Burnet, Son, & Dick. The firm were responsible for the design of many commercial buildings in the West of Scotland. He retired from the firm during the war years, and went to reside in London.



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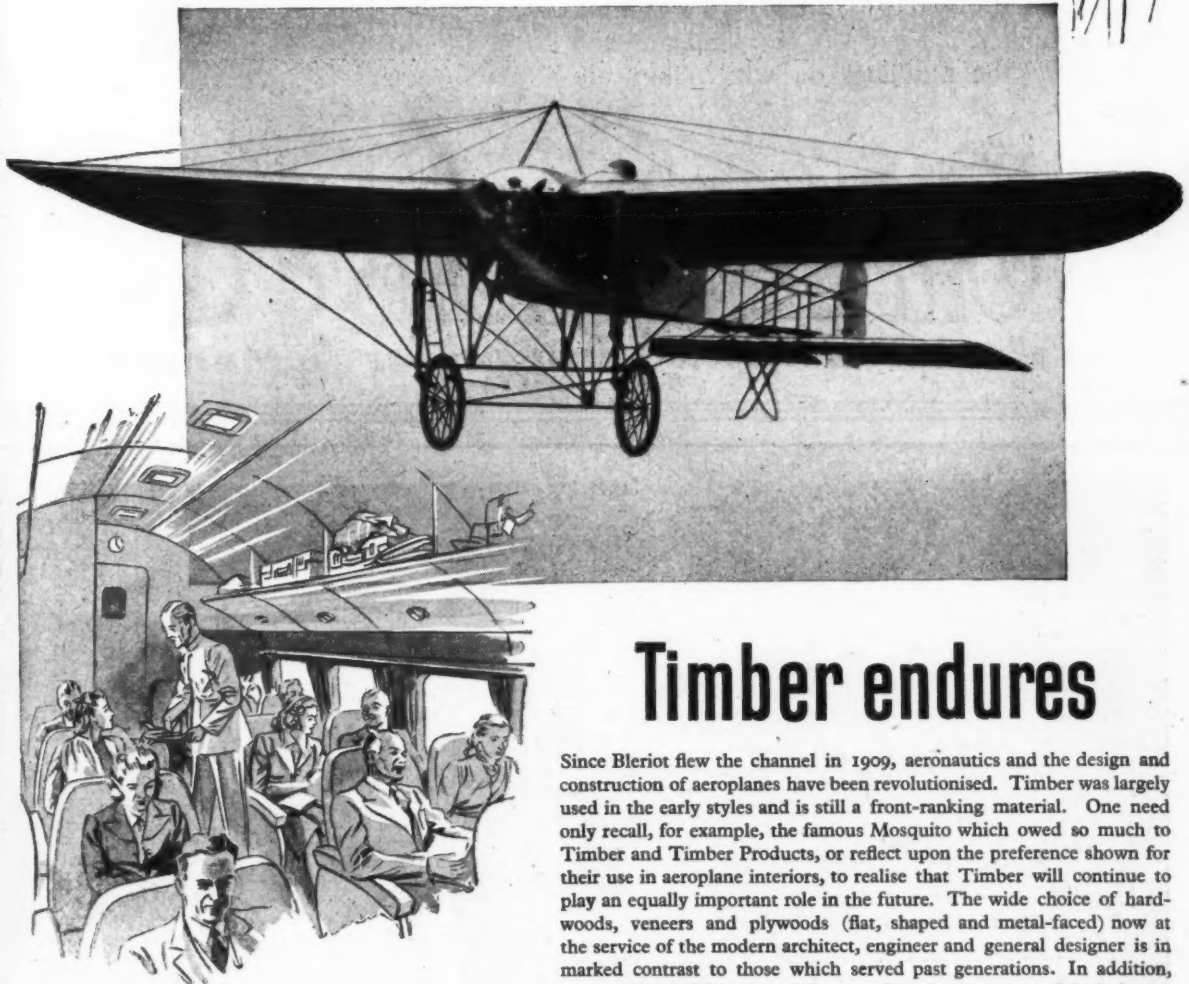
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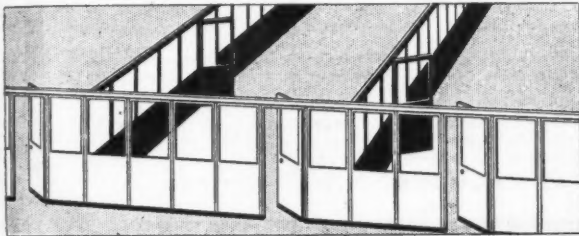
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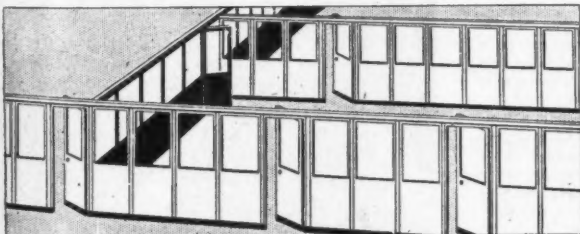
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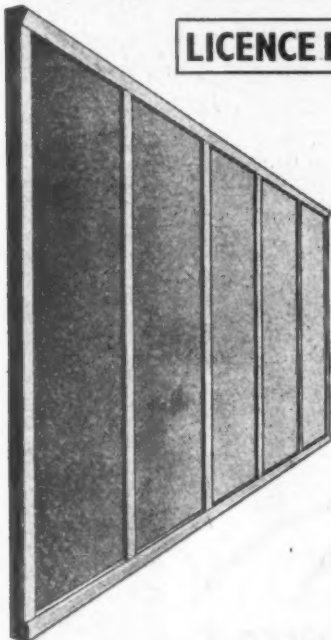
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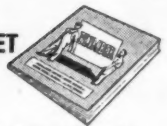
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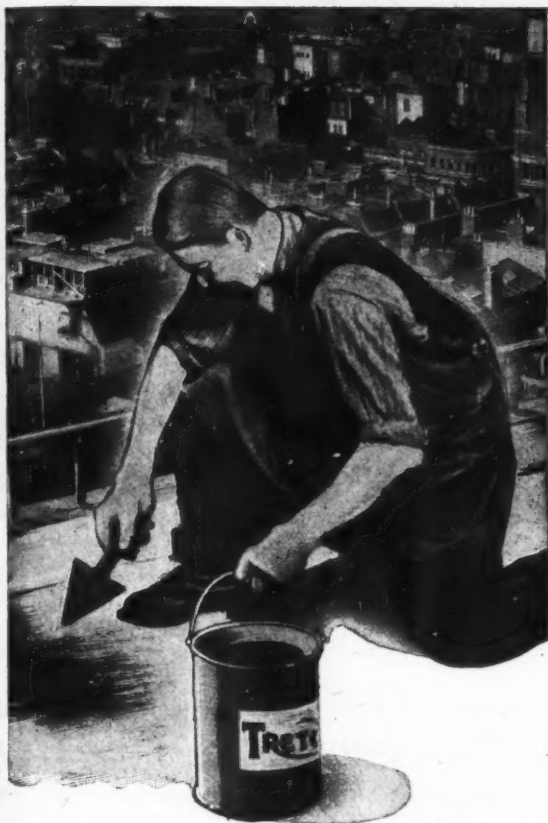
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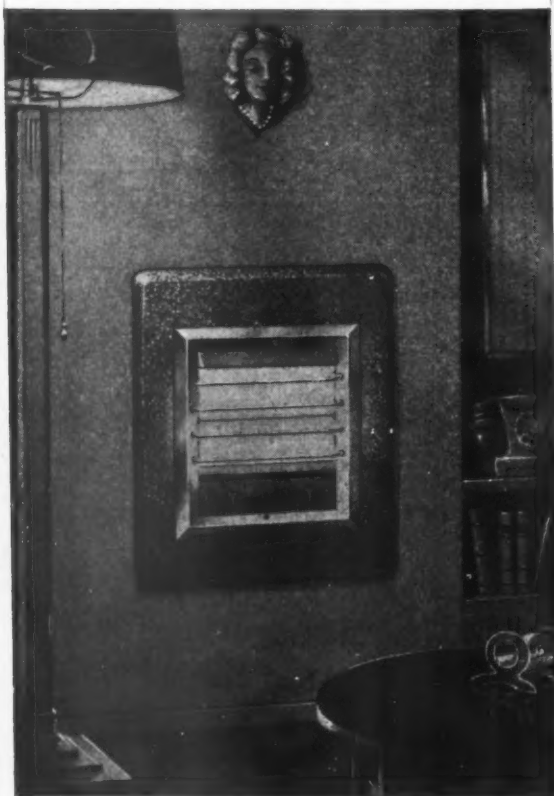
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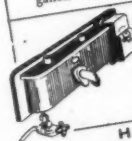
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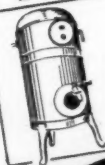
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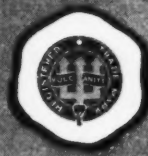
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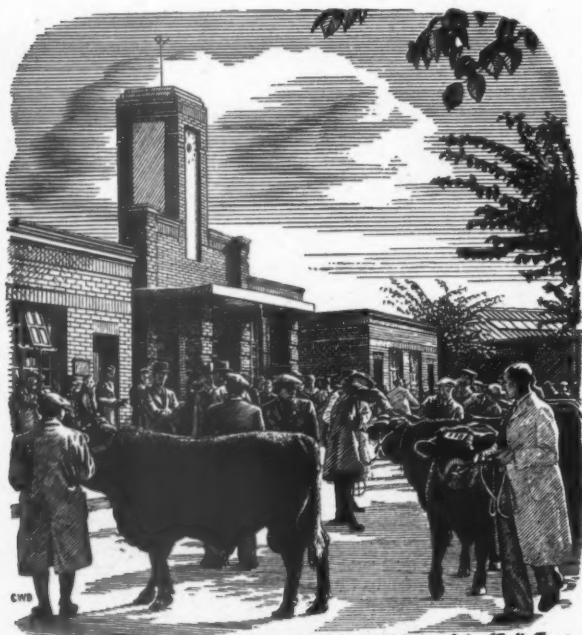
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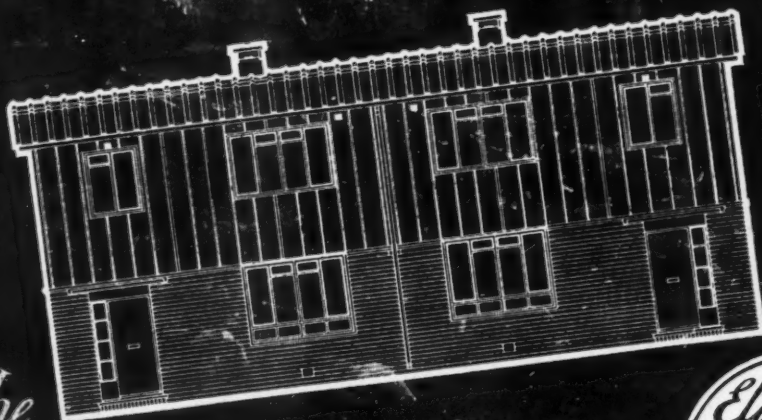
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Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

None of the vacancies in these columns relates to a man between the age of 18 and 50, inclusive, or a woman between the age of 18 and 40, inclusive, unless he or she is excepted from the provisions of the Control of Engagement Order, 1947, or the vacancy is for employment excepted from the provisions of that Order.

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The post will be superannuable under the Local Government (Scotland) Act, 1937.

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Relationship to members of the Council or their staff must be declared in the application. Canvassing, directly or indirectly, will be a disqualification.

Applications, stating age, qualifications by examination, experience and present position, accompanied by copies of not more than three recent testimonials, must be received by the City Engineer, City Hall, Norwich, not later than the first post on Wednesday, 10th March, 1948. 584

EAST SUFFOLK COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the appointment of a SENIOR PLANNING ASSISTANT, in the County Planning Officer's Department, on A.P.T., Grade V (salary £460-£510), plus cost-of-living bonus. This officer will be engaged primarily on reconstruction schemes, and be required to reside in the Lowestoft district.

The commencing salary will be fixed having regard to the qualifications and experience of the successful candidate.

Applicants for the appointment should be either Members or Associate Members of the Town Planning Institute, and preference will be given to those possessing qualifications in engineering, surveying or architecture. The appointment will be in accordance with the National Conditions of Service, will be subject to the Local Government Superannuation Act, 1937, and will be determinable by one month's notice on either side. Applications, stating age, experience, qualifications, present and past appointments, and giving names and addresses of two referees, to be delivered to the undersigned not later than the first post Friday morning, the 19th March, 1948.

G. C. LIGHTFOOT.

Clerk of the County Council.

County Hall, Ipswich. 21st February, 1948. 983

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(3) Heating and Ventilating Engineer: Applicants should be able to prepare designs, lay-outs and estimates of the requirements for the heating, ventilating and domestic hot water installations for all types of school buildings, including Residential Schools.

The appointments are permanent, and the successful applicants, if under 45 years of age, will require to pass a medical examination for admission to the Corporation Superannuation Scheme.

The salary scales for technical assistants in the Corporation are covered by A.P.T., Grades I to VI, of the National Scheme of Salaries, and the persons appointed will be placed within these grades according to qualifications, age, and experience. The minimum salary for A.P.T., Grade I, is £330 per annum, and the maximum salary for A.P.T., Grade VI, is £600 per annum. The salary grade applicable to the Heating and Ventilating Engineer is A.P.T., Grade VI (£535 to £600). In all cases a war increase of £60 per annum is at present payable in addition to these salaries.

Applicants who hold suitable qualifications should be Members or Associate Members of appropriate Institutions.

Applications, stating age, particulars of training, experience, and qualifications, should be lodged with the Director of Education, 123, Bath Street, Glasgow, C.2, not later than 14 days after publication of this advertisement.

WILLIAM KERR.

Town Clerk.

City Chambers. February, 1948. 978

COUNTY COUNCIL OF DURHAM. COUNTY PLANNING DEPARTMENT.

Applications are invited for the following permanent appointments, in the County Planning Department:—

AREA PLANNING OFFICERS, Grade VIII, A.P.T., of the National Scale of Salaries (£625-£700).

ASSISTANT AREA PLANNING OFFICERS, Grade Va, A.P.T. (£490-£550).

PLANNING ASSISTANTS, Grade III, A.P.T. (£390-£435); Grade II, A.P.T. (£360-£405).

RESEARCH ASSISTANT, Grade III, A.P.T. (£390-£435).

In addition to the above salaries the appropriate cost-of-living bonus will be paid.

Applicants should be suitably qualified for the posts. The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination by the Council's Medical Officer. The appointments will be terminable by one calendar month's notice on either side.

Canvassing, either directly or indirectly, will disqualify. Applicants must disclose in writing whether to their knowledge they are related to any member or to the holder of any senior office under the Council.

Applications, stating age, qualifications, present and previous appointments, with copies of two recent testimonials, should be delivered to the County Planning Officer, 10, Church Street, Durham, by noon on Saturday, 13th March, 1948.

J. K. HOPE.

Clerk of the County Council.

Shire Hall, Durham. 25th February, 1948. 994

METROPOLITAN BOROUGH OF PADDINGTON.

APPOINTMENT OF SUPERINTENDENT OF WORKS (WORKS SECTION), HOUSING DEPARTMENT.

The Council invite applications for the appointment of Superintendent of Works (Works Section), Housing Department, at a consolidated salary of £260 per annum (including cost-of-living bonus).

The duties of the appointment will involve supervision of the works side of the whole of the Council's building programme (including large new housing schemes and works of adaptation and conversion) being executed both by contract and by direct labour.

Applicants, who should not be over 50 years of age, must have had good all-round experience of the building trades and of the control and management of such a building organisation, either with a local authority or with a commercial undertaking.

The successful candidate will be required to produce a certificate of birth; pass an examination by the Council's Medical Examiner, and devote the whole of his time to the duties of his office. The appointment will be subject to the Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, and to the provisions of the Paddington Borough Council (Superannuation and Pensions) Act. Applications, stating (a) age, (b) qualifications, (c) present appointment, (d) previous appointments, and (e) experience, and giving the names of three persons to whom reference may be made, should be sent in an envelope marked "Appointment of Superintendent of Works," so as to be received by the undersigned not later than Saturday, 20th March, 1948.

Canvassing, either directly or indirectly, will disqualify.

W. H. BENTLEY.

Town Clerk.

Town Hall, Paddington, W.2. 25th February, 1948. 979

Amended Advertisement.

DORKING URBAN DISTRICT COUNCIL. TECHNICAL ASSISTANT-SURVEYOR'S DEPARTMENT.

Applications are invited for the above appointment, at a salary in accordance with Grade II, A.P.T. Division (£420 per annum, rising to £465 per annum).

The successful applicant will be required to provide a case not exceeding 10 h.p., for which a travelling allowance will be paid in accordance with the National Scale.

Duties will include:—

(a) Examination of all plans submitted under Bye-laws and for Planning purposes and supervision of the works under construction.

(b) Examination of applications for Building Licences and report thereon to the Engineer and Surveyor.

(c) Supervision of any building works carried out by direct or contract labour (other than housing schemes) for the Council.

Preference will be given to applicants who have had considerable experience in a Municipal Engineer's office and who hold the Testamur of the Institute of Municipal Engineers or the R.I.B.A.

The appointment will be subject to the Local Government Superannuation Acts, to the passing of a medical examination, and to the Conditions of the National Scheme of Conditions of Service. It will be terminable by one month's notice on either side.

Applicants who have already applied are not required to renew their applications.

Applications, endorsed "Technical Assistant," must be made on a form obtainable from me, and must reach this office not later than 15th March, 1948.

Canvassing, either directly or indirectly, will disqualify.

H. D. JEFFRIES.

Clerk of the Council.

Pippbrook, Dorking. 982

LONDON COUNTY COUNCIL. QUANTITY SURVEYORS.

Vacancies exist for Quantity Surveyors, in the Housing and Valuation Department, for work in connection with the development of cottage estates and the construction of multi-storey dwellings, at consolidated salaries of up to £580 a year, the commencing salary in each case being determined according to qualifications and experience. Successful candidates will be required to contribute to the Council's Superannuation and Provident Fund, and will be eligible for appointment to the Council's permanent staff and for advancement on the occurrence of vacancies.

Duties will include:—

(a) Measurement of work in construction of houses, roads and sewers, preparation of interim and final bills; measurement and adjustment of sub-contracts; preparation of cost statistics, estimates, etc.

(b) Management of housing contracts of considerable value; interim valuations for payments; measurements of variations and settlement of final accounts.

Forms of application may be obtained from the Director of Housing and Valuer, The County Hall, Westminster Bridge, S.E.1 (a stamped addressed foolscap envelope required). Completed forms must be returned not later than seven days after the appearance of this notice. Canvassing disqualifies. (632) 981

BOSTON URBAN DISTRICT COUNCIL.
APPOINTMENT OF ARCHITECTURAL ASSISTANT (GRADE III OR IV).

Applications are invited for the appointment of an Architectural Assistant, at a salary in accordance with Grade A.P.T., III or IV, of the National Scales, namely, £450 to £495 and £480 to £525, according to qualifications and experience.

Applicants should have had good general training with experience in housing work, and preference will be given to candidates who have passed the Intermediate examination of the Royal Institute of British Architects or who are Registered Architects.

The conditions of service are those formulated by the National Joint Council, and the appointment is subject to the passing of a medical examination and the provisions of the Local Government Superannuation Act, 1937. Housing accommodation will be made available to the successful candidate if required.

Applications, giving full details of training, qualifications, experience, and copies of two testimonials, should be sent to me by first post on Tuesday, 16th March, 1948.

N. C. HARRISON,

Engineer and Surveyor.

Council Offices, Grangetown-on-Tees.

Yorkshire.

21st February, 1948.

971

COUNTY BOROUGH OF DERBY.**BOROUGH ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointment, on the permanent staff, in accordance with the National Scale of Salaries:—

ONE JUNIOR QUANTITY SURVEYOR (Grade IV, A.P. & T. Division). Salary, £420-£465 per annum, plus cost-of-living bonus, at present £29 15s. (male).

Applicants should be fully experienced in working-up and accustomed to the requirements of a Quantity Surveyor's office.

The appointment will be subject to one month's notice in writing on either side, and to the terms of the National Joint Council's Scheme of Conditions of Service, and the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Forms of application may be obtained from Mr. W. East, F.R.I.B.A., Borough Architect, The Council House, Corporation Street, Derby, and should be returned when completed, together with copies of three recent testimonials, to arrive not later than Friday, 19th March, 1948.

Canvassing, directly or indirectly, will be a disqualification.

C. ASHTON,

Town Clerk

Market Place, Derby.

1002

WEST SUSSEX COUNTY COUNCIL.**COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments, at salaries in accordance with the National Scales of Salaries (bonus consolidated):—

(a) ASSISTANT QUANTITY SURVEYOR. A.P.T. Grade V (£520-£570).

(b) ASSISTANT ARCHITECT. A.P.T., Grade IV (£480-£525).

Further particulars should be obtained from F. R. Steele, F.R.I.B.A., F.R.I.C.S., M.T.P.I., County Architect, County Hall, Chichester, to whom detailed applications must be submitted not later than the 19th March, 1948.

T. C. HAYWARD,

Clerk of the County Council.

County Hall, Chichester.

20th February, 1948.

970

CORPORATION OF LONDON.**LONDON CENTRAL MARKETS—SMITHFIELD.****APPOINTMENT OF ASSISTANT ARCHITECTS IN THE CITY SURVEYOR'S DEPARTMENT.**

Applications are invited for the appointment of Two Assistant Architects, to be engaged exclusively in works of rehabilitation, reconstruction, and improvements of the above properties.

(a) SENIOR ASSISTANT. Consolidated salary, £600-£700 per annum, according to qualifications and experience.

(b) JUNIOR ASSISTANT. Consolidated salary, £400-£500 per annum, according to qualifications and experience.

Candidates for (a) should be Associates of the Royal Institute of British Architects, with extensive experience in the design and preparation of working drawings for large commercial buildings and for the conducting of Contract works.

Candidates for (b) should preferably be Associates of the Royal Institute of British Architects, with a good general architectural experience, and capable of preparing working drawings and specifications.

The appointments, whilst being for the temporary staff, may extend over a number of years, as the amount of work envisaged is very considerable.

The appointments are subject to provisions of the Corporation's Superannuation Scheme, and candidates will require to pass a medical examination. The appointments are subject to one month's notice on either side.

Applications, giving particulars of age, training, and experience, past and present appointments, and date when available to commence duties if selected, together with a copy of a recent testimonial to be made to George Holliday, F.R.I.C.S., City Surveyor, 55-61, Moorgate, E.C.2.

1003

EAST RIDING COUNTY COUNCIL.

Applications are invited for the following appointments, on the permanent staff of the County Architect's Department:—

ASSISTANT ARCHITECTS (Grades IV to VI). The salary range is £420-£600 per annum, plus cost-of-living bonus, at present £59 15s., and each suitable applicant will be appointed to the grade appropriate to his qualifications and experience. Provision is made for progress upon satisfactory service.

Applicants should have had satisfactory experience in the design and construction of modern buildings generally, and of schools in particular. Preference will be given to applicants who have appropriate professional qualifications.

The appointments, which are terminable by one month's notice on either side, are subject to the provisions of the Local Government Superannuation Act, 1937, in connection with which the successful candidate will be required to pass a medical examination.

Applications, stating age, training, qualifications, experience, and details of past and present appointments, with salary, accompanied by copies of three recent testimonials, are to reach the County Architect, County Hall, Beverley, not later than Monday, 15th March, 1948.

T. STEPHENSON,

Clerk of the Council.

County Hall, Beverley.

February, 1948.

964

COUNTY OF LINCOLN—PARTS OF**KESTOVEN.****COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the appointment of ASSISTANT ARCHITECT in the above Department.

Salary will be in accordance with Grade VI of the A.P.T. Division of the National Scales, i.e., £535, rising by annual increments of £20 and £25 to a maximum of £600 per annum, plus cost-of-living bonus of £25 15s. per annum, and travelling and subsistence allowances. A lodging allowance of 30s. per week up to a maximum of six months will be paid to married men where difficulty is found in obtaining housing accommodation, A.R.I.B.A., or similar qualification, is essential, and experience in Educational and General County work is desirable.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, to a satisfactory medical certificate, and to termination by three months' notice in writing on either side.

Applications, stating age, experience and qualifications, present appointment and salary, together with the names of two referees, should be received by the undersigned within a fortnight of the appearance of this advertisement.

J. E. BLOW,

Clerk of the County Council.

County Offices, Stamford, Lincs.

996

RURAL DISTRICT COUNCIL OF COOKHAM.**APPOINTMENT OF ARCHITECT AND BUILDING SURVEYOR.**

Applications are invited from persons possessing recognized professional qualifications for the appointment of Architect and Building Surveyor, at a commencing salary of £650 per annum, rising by annual increments of £25 to a maximum of £700 per annum.

The successful candidate will not be allowed to engage in private practice, and will be required to devote the whole of his time to the duties of his office. He must provide a motor car for use in connection with his duties, for which an allowance will be paid in accordance with the Council's scale. Candidates must (a) be qualified to advise the Council on their post-war housing programme and to prepare all plans, quantities, specifications, estimates, etc., and to supervise construction, and (b) have had experience in all the duties appertaining to the office of Building Surveyor. Previous local government experience in a position of responsibility will be an additional recommendation.

The appointment will be subject to (a) the National Scheme of Conditions of Service, (b) the provisions of the Local Government Superannuation Act, 1937, (c) the successful candidate satisfactorily passing a medical examination, and (d) termination by three months' notice on either side.

Forms of application may be had from the undersigned on receipt of a stamped and addressed envelope, and applications, accompanied by copies of three recent testimonials, must be completed and returned by the 3rd April, 1948.

R. PAXTON WHEELER,

Clerk of the Council.

Council Offices, "Oaklands," 1, Bath

Road, Maidenhead, Berks.

2nd March, 1948.

1006

BUCKS COUNTY COUNCIL.**APPOINTMENT OF QUANTITY SURVEYOR.**

Applications are invited for the above appointment, on Grade VIII (£685-£760 p.a.).

Form of application, together with full particulars, may be obtained from F. A. C. Maund, County Architect, County Offices, Aylesbury, and must be returned to him by 22nd March, 1948.

GUY R. CROUCH,

Clerk of the County Council.

County Hall, Aylesbury.

25th February, 1948.

1000

NEWCASTLE-UPON-TYNE REGIONAL**HOSPITAL BOARD.**

Applications are invited for the appointment of ARCHITECT, to the above Board, at an inclusive salary of £1,350, rising by annual increments of £50 to £1,550 per annum.

His primary duty will be to advise the Board on all architectural matters connected with the Hospital Service and experience in hospital planning and construction is therefore desirable. His other duties permitting, he will be allowed to undertake practical architectural work. He will be required to devote the whole of his time to the service of the Board.

The post is superannuable under the National Health Service (Superannuation) Regulations, 1947, and will be subject to termination by three months' notice on either side.

Applications, giving particulars of qualifications and experience, and the names of three persons to whom reference might be made concerning character and ability, should be addressed in an envelope endorsed "Architect," to the Secretary, Newcastle-upon-Tyne Regional Hospital Board, "Dunira," Osborne Road, Newcastle-upon-Tyne, 2, so as to reach him not later than 20th March, 1948. Canvassing in any form will disqualify.

1007

EAST SUFFOLK COUNTY COUNCIL.**COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following posts, in the County Architect's Department:—

(a) ONE QUANTITY SURVEYOR. A.P.T., Grade VII. Consolidated salary, £635-£710.

(b) ONE CLASS A ASSISTANT ARCHITECT. A.P.T., Grades V and VI. Consolidated salary, £520-£660.

(c) THREE CLASS B ASSISTANT ARCHITECTS. A.P.T., Grades III and IV. Consolidated salary, £450-£525.

The commencing salary in the grades will be fixed according to the qualifications and experience of the candidate.

Applicants for appointment (a) should be qualified and thoroughly experienced, and preference will be given to those who are Associates of the R.I.C.S. (Quantities Division). They should be capable of undertaking all stages of the work for the preparation of Bills of Quantities, including estimating, site measurements, and preparation of interim certificates, and the preparation and settlement of final accounts.

Applicants for appointment (b) must be Registered Architects, and preferably Associates of the R.I.B.A. The work to be dealt with is that normally carried out by a Local Authority. Candidates must be quick and accurate draughtsmen, capable of carrying a job through in all its stages and with a sound knowledge of design, building construction, and specifications.

Applicants for appointments (c) must be Registered Architects, and preferably members of the R.I.B.A. They must be quick and accurate draughtsmen, fully conversant with 1/4 in. scale, half inch and full size details for all types of buildings normally dealt with by a Local Authority, and have a good knowledge of design, construction and specifications.

The appointments will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.

Applications, stating age, qualifications, and full details of previous experience, accompanied by copies of three recent testimonials, should be sent to E. J. Symcox, F.R.I.B.A., County Architect, County Hall, Ipswich, not later than 19th March, 1948.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

G. C. LIGHTFOOT,

Clerk of the Council.

County Hall, Ipswich.

1004

Architectural Appointments Vacant

4 lines or under, 5s.; each additional line, 1s. 6d.

SEELY & PAGET, F.R.I.B.A., require a fully qualified ASSISTANT; must be experienced working drawings and specifications with sound knowledge of all normal methods of construction; licensed work now in hand includes many important Ecclesiastical commissions. Apply by letter, giving usual details, to 41, Cloth Fair, E.C.1. 907

COMPETENT Qualified ARCHITECTURAL ASSISTANT required to work under Chief Assistant in extensive Norfolk practice; must be car driver and single for preference; also JUNIOR ASSISTANTS; salaries according to ability. Apply Box 950.

TAIROBI—HEAD ASSISTANT required immediately; good technical knowledge, including some reinforced concrete. Apply Waterhouse & Ripley, Staple Inn Buildings, High Holborn, W.C.1. 981

TWO ARCHITECTURAL ASSISTANTS, Intermediate standard, required for busy West End Architects' office. Box 1001.

QUALIFIED ARCHITECTURAL SENIOR ASSISTANT wanted; experienced in modern Flats and Commercial Buildings. Applications in writing, giving full particulars and salary required, to Messrs. Trehearne & Norman, Preston & Partners, 83, Kingsway, W.C.2. 960

EXPERIENCED ARCHITECT'S ASSISTANT, full time; surveying, dilapidations, reports, supervision; age between 35-40 preferred; will be required to travel in Britain; state full particulars, qualifications and experience, age and salary required. Victor Bain, F.R.I.B.A., 3, Queen Square, Leeds, 2. 995

ARCHITECT'S ASSISTANT required for London office immediately; work in hand mainly housing, industrial and conversions; salary, £400-£500. Write, stating qualifications, age, and experience, to Box 993.

ARCHITECT'S ASSISTANT required immediately; good designer; working drawings and details; with sound practical knowledge of construction; apply in writing, stating previous experience and salary required. Pite Son & Fairweather, Chartered Architects, 6, Queen Anne's Gate, S.W.1. 990

SENIOR ARCHITECTURAL ASSISTANT, salary £550-£650, according to capabilities; knowledge of hospital work desirable, but not essential. Applications, stating age, qualifications and experience, to the Surveyor, London Hospital, Whitechapel, E.1. 986

ARCHITECTURAL ASSISTANT required; capable of preparing working drawings and details from sketch plans; experience of modern hospital work desirable; Bloomsbury area; 5-day week. Write, stating age, experience, and salary required, Box 437, c/o 7, Coptic Street, W.C.1. 1012

ASSISTANT (Inter. R.I.B.A. standard) required immediately; single man preferable. Apply, stating age, experience, and salary required, to Suffolk Group, Chartered Architects, 1, Quay Street, Woodbridge, Suffolk. 1008

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT, R.I.B.A. final standard, requires responsible post in South Devon; Exeter area preferred. Box 44.

REGISTERED ARCHITECT (46) requires temporary or permanent post; 25 years' general architectural experience; would consider part-time work; London or Brighton area. Box 43.

ARCHITECTURAL ASSISTANT (21), Inter. R.I.B.A. standard, 6 months' practical office experience, requires position immediately in London office. Box 42.

JUNIOR ARCHITECTURAL ASSISTANT (19) requires position in Architect's office (Central to North-East London); 3 1/2 years' varied experience; taking Inter. R.I.B.A. November. Apply R. Chellis, 89, Globe Road, Woodford Green, Essex. 46

ASSISTANT CLERK OF WORKS, Maintenance Officer (or similar post), qualified Architect (37), desires active practical experience; southern counties, preferably South Coast; tree at short notice. Box 45.

Other Appointments Vacant

4 lines or under, 5s.; each additional line, 1s. 6d.

REINFORCED CONCRETE ENGINEER, with expert knowledge of building construction; fine opportunity for man with drive and initiative. Box 945.

SENIOR Executive required as **COMMERCIAL MANAGER**; woodworking department of large and long-established concern. Write age, qualifications, experience, and salary required, to Box 56, CRC, 29, Hertford Street, London, W.1. 991

DESIGNER required by an old-established Midland firm of repute, who are makers of ornamental wrought gates and other architectural metal work; applicants should be about 30 years of age, with first-class experience; preference given to a graduate in industrial design of the Royal College of Art or similar institution. Apply with full particulars to Box 977.

JOINERY Manufacturers, with large capacity, desire to appoint accredited AGENTS, with building trade connections, to handle Joinery and Doors, in Home Counties, Midlands and East Anglia. Box 1005.

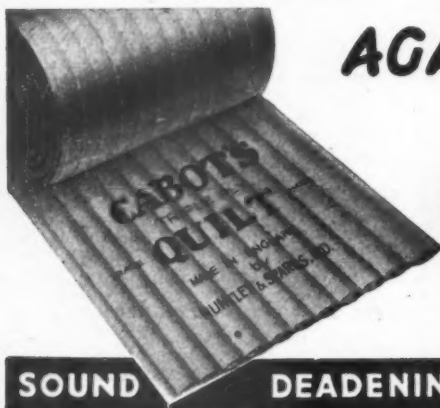
DRAUGHTSMAN required in Constructional Department of large well-known company in the West End of London; applicants should be 21/25 years of age, and have had 3 years' technical college (Building or Architectural Course), with approximately 12 months or 2 years in architect's and/or contractor's office; must be excellent draughtsman, with some knowledge of building construction, and experience in the preparation of working drawings. Write, stating age, qualifications, experience and salary required, to Box 988.

SECRETARY required by Architect; 5-day week; salary about £375 per annum. Write Frederick Gibberd, 35, Gordon Square, W.C.1. 999

APPLICATIONS are invited for the position of **FIELD ENGINEER**, with a large firm of Civil Engineering Contractors, on a construction project in the Middle East; applicants should be thoroughly experienced in Surveying and in setting-out buildings and earth works; Experience as a Clerk of Works would also be an advantage; good salary and allowances; age preferably under 40; contract of 27 months' duration, with opportunity of extension. Please give full details of age, qualifications, etc., to Box 1010.

APPLICATIONS are invited for the position of **ASSISTANT ENGINEER**, with a large firm of Civil Engineering Contractors, on a construction project in the Middle East; applicants should possess a University Degree in Engineering, and should, since taking the Degree, have completed 3 or 4 years' service as a Contractor's Engineer, during which time he should have gained experience in the execution of deep trench excavations, sewerage and general earthworks; good salary and allowances; age preferably under 40; contract of 27 months' duration, with opportunity of extension. Please give full details of age, qualifications, etc., to Box 1011.

CIVIL ENGINEER, experienced in reinforced concrete and structural steel design, and estimating for civil engineering works, required for London Office of large firm of Civil Engineering Contractors; applicants must hold a good Degree in Civil Engineering, and be Corporate Members of the Institution of Civil Engineers and/or Institution of Structural Engineers; age preferably 35 or under; state salary required. Please give full details of age, qualifications, etc., to Box 1009.



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CHARTERED ARCHITECT, with qualified staff, offers full services to Members of the Profession, with benefit of own office and car; wide experience of war damage work and housing. Box 966.

CHARTERED ARCHITECT AND SURVEYOR, with own office in Midlands, is able to assist Members of the Profession in all Branches of Architectural and Surveying work; willing to travel. Box 957.

SPARE-TIME Assistance offered by capable Assistant in London; sketches, working drawings and surveys. Box 989.

SENIOR ASSISTANT offers services in part-time work; own or client's office; over 20 years' experience; sketch plans, W.D.s, surveys, etc.; London or South Coast area. Box 998.

Miscellaneous

4 lines or under, 5s.; each additional line, 1s. 6d.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 9-17, St. Pauls Road, N.1. Canonbury 3061.

NEWER HEAT DISPLAY, Building Centre, Conduit Street, W.1. New solid-fuel appliances. New heating methods. New standard of home comfort. Open 10-5. Organised by the Coal Utilisation Joint Council. 730

SOUTH AFRICA—The Builder's paradise; liner and rail, £100; no waiting. Write O.P.S.A. Club, Veryan, Cornwall, stating desired date. 915

R.A. EXHIBITORS, with long list of complete exhibition successes, have staff available for occasional Perspectives, Models and Fine Drawings; contemporary work preferred. Box 936.

BOURNEMOUTH—Children welcome; near B. sands; good food; comfortable beds; terms, 5d. gns. Broughty Ferry Hotel, Boscombe 3000. 962

WANTED, urgently, "Graphos" Pens; complete with nibs. Reply Box 921.

CENTRAL HEATING OIL BURNERS—Insist on the British-made Parwing—no stoking, clean, trouble free; no waiting for coal or coke deliveries; no embargo now. Write at once to Parker, Winder & Archur, Ltd., Makers, 30, Broad Street, Birmingham, 1.

PERSPECTIVES, Wash Drawings, Lettering.—For every kind of activity demanding the expert use of pencil, pen and brush. R. Lavery, 44, Aldershot Road, Guildford, Surrey. 544

WANTED—Late 18th or early 19th century (wood) Fireplace Surrounds; overall widths, 5-6 ft. and 4-5 ft.; state size and price delivered to Northampton. Box 992.

WANTED—Geological Map of Thorpe-le-Soken. Essex. A. R. Shepperdson, L.R.I.B.A., F.P.S., Lloyd's Chambers, Cornhill, Ipswich. 987

FOR DISPOSAL—37 copies of "The Architects' Journal," from 26th January, 1939, to 21st September, 1939; in perfect condition; including Index and all Information Sheets. Box 985.

ARCHITECT desires two or three Rooms, in good central position, for offices. G. E. Brich, 28, Gt. Castle Street, W.1. Tel.: Mayfair 1783. 990

WANTED, urgently, "Community Centres," by Flora and Gordon Stephenson. Reply, stating price, to Box 997.

Educational Announcements

4 lines or under, 5s.; each additional line, 1s. 6d.

R.I.B.A. and T.P. INST. EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 212, Euston Road, N.W.1. Tel.: EUS. 7760.

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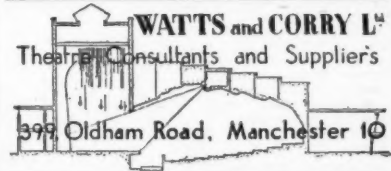
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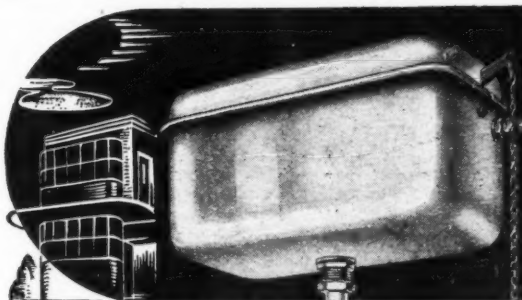


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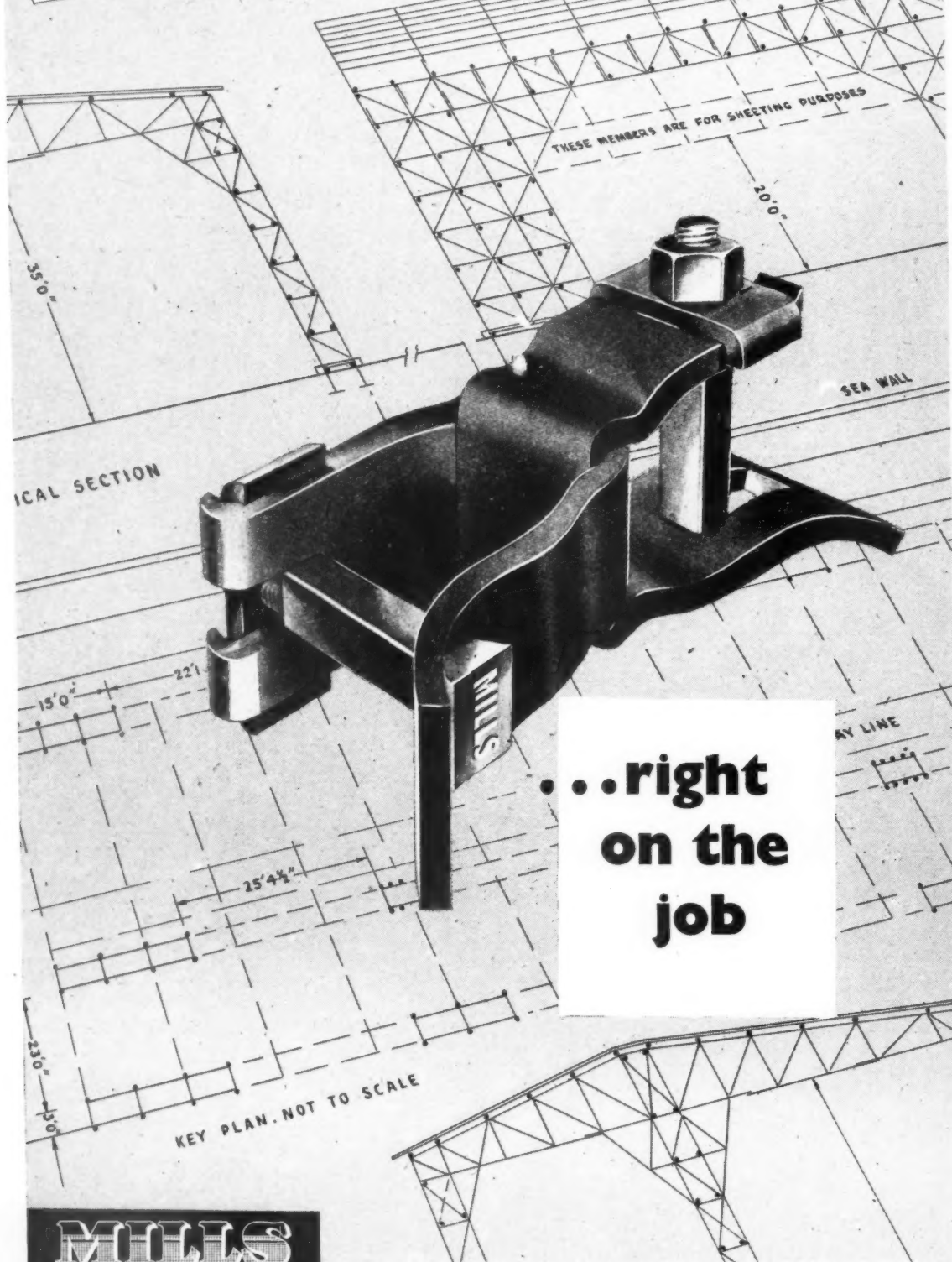
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